National Comprehensive Cancer Network®

NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)

Distress Management

Version 3.2019 — May 6, 2019

NCCN.org

Continue

National Comprehensive Cancer Network®

NCCN Guidelines Version 3.2019
Distress Management

NCCN Guidelines Index
Table of Contents
Discussion

*Michelle B. Riba, MD, MS/Chair θ
University of Michigan
Rogel Cancer Center

*Kristine A. Donovan, PhD, MBA/Vice-Chair θ
Moffitt Cancer Center

Barbara Andersen, PhD θ
The Ohio State University Comprehensive Cancer Center - James Cancer Hospital and Solove Research Institute

Ilana Braun, MD θ
Dana-Farber/Brigham and Women's Cancer Center
William S. Breitbart, MD θ Þ £
Memorial Sloan Kettering Cancer Center

Benjamin W. Brewer, PsyD θ
University of Colorado Cancer Center

Luke O. Buchmann, MD ¶
Huntsman Cancer Institute at the University of Utah

Matthew M. Clark, PhD θ £
Mayo Clinic Cancer Center

Molly Collins, MD £
Fox Chase Cancer Center

Cheyenne Corbett, PhD θ
Duke Cancer Institute

Stewart Fleishman, MD £ θ
Consultant

Sofia Garcia, PhD θ
Robert H. Lurie Comprehensive Cancer Center of Northwestern University

Donna B. Greenberg, MD θ Þ
Massachusetts General Hospital Cancer Center

Rev. George F. Handzo, MA, MDiv £
Consultant

Laura Hoofring, MSN, APRN # θ †
The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins

Chao-Hui Huang, PhD θ
University of Alabama at Birmingham Comprehensive Cancer Center

Robin Lally, PhD, MS, RN #
Fred & Pamela Buffett Cancer Center

Sara Martin, MD £
Vanderbilt-Ingram Cancer Center

Lisa McGuffey, PhD, JD θ
University of Wisconsin Carbone Cancer Center

William Mitchell, MD † £
UC San Diego Moores Cancer Center

Laura J. Morrison, MD £
Yale Cancer Center/Smilow Cancer Hospital

Megan Pailler, PhD θ
Roswell Park Comprehensive Cancer Center

Oxana Palesh, PhD, MPH θ £
Stanford Cancer Institute

Francine Parnes, JD, MA ¥
Patient Advocate

Janice P. Pazar, RN, PhD θ £
St. Jude Children's Research Hospital/The University of Tennessee Health Science Center

Laurel Ralston, DO θ
Case Comprehensive Cancer Center/ University Hospitals Seidman Cancer Center and Cleveland Clinic Taussig Cancer Institute

Jaroslava Salman, MD θ
City of Hope National Medical Center

Moreen M. Shannon-Dudley, MSW £
Fred Hutchinson Cancer Research Center/ Seattle Cancer Care Alliance

Alan D. Valentine, MD θ
The University of Texas MD Anderson Cancer Center

NCCN
Susan Darlow, PhD
Nicole McMillian, MS

NCCN Guidelines Panel Disclosures

Continue

ξ Bone marrow transplantation
Þ Internal medicine
† Medical oncology
# Nursing
¥ Patient advocacy
θ Psychiatry, psychology, including health behavior
£ Supportive care including palliative, pain management, pastoral care, and oncology social work
¶ Surgery/Surgical oncology
* Discussion Section Writing Committee

National Comprehensive Cancer Network®

NCCN Guidelines Version 3.2019
Distress Management

NCCN Guidelines Index
Table of Contents
Discussion

NCCN Distress Management Panel Members
Summary of the Guidelines Updates

Key Terms:

• Distress (DIS-1)
• Definition of Distress in Cancer (DIS-2)
• Standards of Care for Distress Management (DIS-3)

Overview of Evaluation and Treatment Process (DIS-4)
Management of Expected Distress Symptoms (DIS-5)

NCCN Distress Thermometer and Problem List (DIS-A)
Psychosocial Distress Patient Characteristics (DIS-B)

Psychological/Psychiatric Treatment Guidelines (DIS-6)
Social Work and Counseling Services: Practical Problems (DIS-24)
Social Work and Counseling Services: Psychosocial Problems (DIS-25)
Chaplaincy Care (DIS-26)
Principles for Implementation of Standards and Distress Management Guidelines (DIS-27)
Institutional Evaluation of Standards of Care (DIS-28)

For End-of-Life Issues, See the NCCN Guidelines for Palliative Care
For Cancer Pain, See the NCCN Guidelines for Adult Cancer Pain

Clinical Trials: NCCN believes that the best management for any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

To find clinical trials online at NCCN Member Institutions, click here: nccn.org/clinical_trials/clinicians.aspx.

NCCN Categories of Evidence and Consensus: All recommendations are category 2A unless otherwise indicated.

See NCCN Categories of Evidence and Consensus.

National Comprehensive Cancer Network®

NCCN Guidelines Version 3.2019
Distress Management

NCCN Guidelines Index
Table of Contents
Discussion

Updates in Version 3.2019 of the NCCN Guidelines for Distress Management from Version 2.2019 include:
- **The Discussion has been updated to reflect the changes in the algorithm. (MS-1)**

Updates in Version 2.2019 of the NCCN Guidelines for Distress Management from Version 1.2019 include:

DIS-27 Principles for Implementation of Standards and Distress Management Guidelines
- **This is a new section that provides recommendations to support standards and implementation of the Distress Management Guidelines. This section replaces the "Recommendations for Implementation of Standards and Guidelines" and "Recommended Readings for Implementation of Psychosocial Care into the Routine Care of Patients with Cancer" that were previously in the guidelines.**

Updates in Version 1.2019 of the NCCN Guidelines for Distress Management from Version 2.2018 include:

DIS-4 Overview of Evaluation and Treatment Process
- **Evaluation: "...by primary oncology team of oncologoyst, nurse, advanced practice ~~oncology nurse~~ *professional,* and..."**

DIS-5 Management of Expected Distress Symptoms
- **Expected distress symptoms: *Financial worries* added.**
- **Interventions:**
  - **Sub-bullet added, *Discuss advance care planning***
  - **Eighth bullet revised, "Family/*couple/caregiver* support..."**
  - **Build trust removed.**

DIS-B Psychosocial Distress Patient Characteristics
- **Patients at increased risk for distress: Sub-bullet revised, "History of *trauma and/or* abuse..."**
- **Periods of increased vulnerability: This section was extensively revised.**
- **Footnote 1: Reference was updated.**

DIS-6 Psychological/Psychiatric Treatment Guidelines
- **Evaluation for: *Suicide risk* added.**

DIS-9 Neurocognitive Disorders: Delirium
- **Treatment: Revised, "~~Antipsychotics +~~ Behavioral management + family support/education environment ± *pharmacotherapy*"**

DIS-10 Depressive Disorders
- **Evaluation: *Demoralization* added as a sub-bullet.**
- **Treatment: (Same changes below also made on DIS-12 for Bipolar and Related Disorders)**
  - **No danger to self or others: Bullet revised, ~~Psychiatric~~ *Mental health* treatment and follow-up/patient and family education. Change also made in pathway below.**
  - **Danger to self or others: Sub-bullet revised, "Remove *guns/* dangerous objects."**

DIS-17 Trauma and Stressor-Related Disorders
- **Evaluation: Last bullet revised, Assess ~~for~~ past trauma *and/or cancer-related post-traumatic stress.***

DIS-18 Trauma and Stressor-Related Disorders: Adjustment Disorders
- **No danger to self or others: After treatment revised, "Medications ~~prescribed~~ and/or psychotherapy."**
- **Danger to self or others: Sub-bullet revised, "Remove *guns/* dangerous objects."**

DIS-21 Substance-Related and Addictive Disorders
- **First column revised: "Signs, symptoms, and history of dependence, active *substance ab*use disorder, or addiction ~~(See NCCN Guidelines for Adult Cancer Pain)~~."**
- **Footnote g revised: Opioids, alcohol, tobacco, or other. *For opioids, also see Opioid Principles, Prescribing, Titration, Maintenance, and Safety in the* NCCN Guidelines for Adult Cancer Pain (PAIN-E). *For tobacco use see the* NCCN Guidelines for Smoking Cessation.**

DIS-22 Substance-Related and Addictive Disorders
- **First column: Revised to, "Following a~~ppropriate detoxification regimen~~ *appropriate treatment and/or management program*.**

Continued

DIS-23 Personality Disorders
- ***Schizotypal*** **added as a sign and symptom.**
- **Evaluation: Sub-bullet revised, Fear~~ful~~**

DIS-24 Social Work and Counseling Services
- **Practical problems**
  - **Bullet revised, "~~Concrete~~ *Basic* needs, including housing, food, financial*/insurance concerns*** **~~assistance programs~~, assistance with activities of daily living (ADLs), and ..."**
  - **Grief and loss was removed.**
- **Footnote i revised: "Social work and counseling services include mental health ~~services using~~** ***care as described in the*** **psychological/psychiatric treatment guidelines..." (Also on DiS-25)**

DIS-25 Social Work and Counseling Services
- **Psychosocial problems; Type of problem**
  - **Eighth bullet revised: ~~Functional~~ Changes *regarding* body image and ~~sexuality~~** ***sexual health***
  - **Ninth bullet revised: ~~End of life~~** ***Grief*****, bereavement,** ***and coping with loss***
  - **Bullets added:** ***Depressive symptoms*****,** ***Suicidal ideation, Anxiety (ie, fears, nervousness, worry)***
- **Social work and counseling interventions**
  - **Mild psychosocial problems:** ***Strengthen coping strategies*** **added.**
  - **Severe/moderate psychosocial problems: Last bullet revised, Consider referral for chaplaincy ~~counseling~~** ***care***

DIS-26 Chaplaincy Care
- **The Chaplaincy Care treatment algorithms were extensively revised.**

DIS-29 Institutional Evaluation of Standards of Care
- **Interventions: Second bullet revised,** ***Distress Thermometer*** **(0–10)** ***and Problem List*** **screening tool in clinics and inpatient setting.**
- **Patient Outcomes: Revised to, "*Reduced distress,* satisfaction (CQI survey of impact)."**

"DISTRESS"

The term "distress" was chosen because it:

- **Is more acceptable and less stigmatizing than "psychiatric," "psychosocial," or "emotional"**
- **Sounds "normal" and less embarrassing**
- **Can be defined and measured by self-report**

Definition of Distress in Cancer (DIS-2)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

DEFINITION OF DISTRESS IN CANCER

Distress is a multifactorial unpleasant experience of a psychological (ie, cognitive, behavioral, emotional), social, spiritual, and/or physical nature that may interfere with the ability to cope effectively with cancer, its physical symptoms, and its treatment. Distress extends along a continuum, ranging from common normal feelings of vulnerability, sadness, and fears to problems that can become disabling, such as depression, anxiety, panic, social isolation, and existential and spiritual crisis.

Standards of Care for Distress Management (DIS-3)

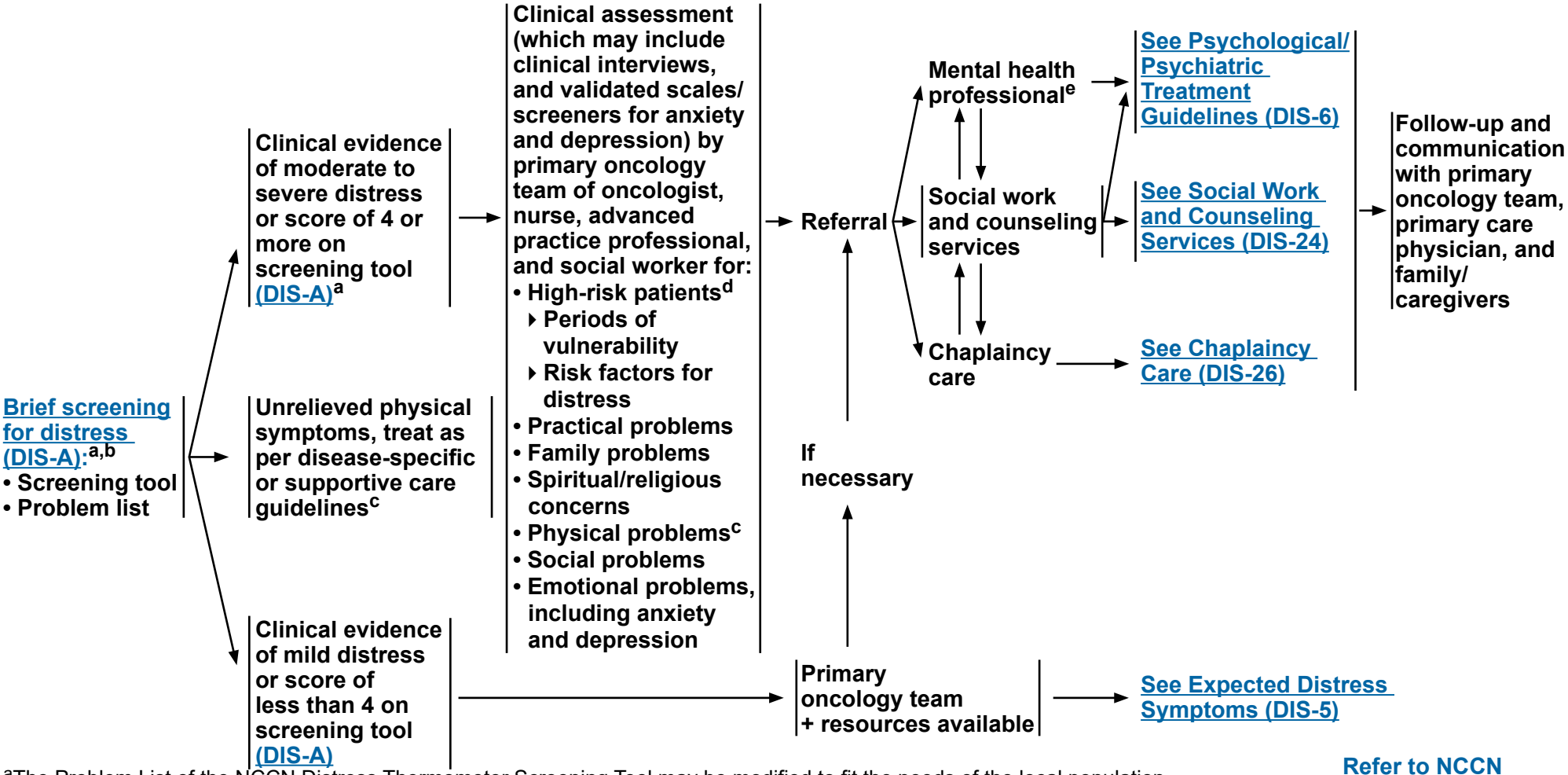
Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

STANDARDS OF CARE FOR DISTRESS MANAGEMENT

- **Distress should be recognized, monitored, documented, and treated promptly at all stages of disease and in all settings.**
- **Screening should identify the level and nature of the distress.**
- **Ideally, patients should be screened for distress at every medical visit as a hallmark of patient-centered care. At a minimum, patients should be screened for distress at their initial visit, at appropriate intervals, and as clinically indicated, especially with changes in disease status (ie, remission, recurrence, progression, treatment-related complications).**
- **Distress should be assessed and managed according to clinical practice guidelines.**
- **Interdisciplinary institutional committees should be formed to implement standards for distress management.**
- **Educational and training programs should be developed to ensure that health care professionals and certified chaplains have knowledge and skills in the assessment and management of distress.**
- **Licensed mental health professionals and certified chaplains experienced in psychosocial aspects of cancer should be readily available as staff members or by referral.**
- **Medical care contracts should include adequate reimbursement for services provided by mental health professionals.**
- **Clinical health outcomes measurement should include assessment of the psychosocial domain (eg, quality of life and patient and family satisfaction).**
- **Patients, families, and treatment teams should be informed that distress management is an integral part of total medical care and is provided with appropriate information about psychosocial services in the treatment center and the community.**
- **Quality of distress management programs/services should be included in institutional continuous quality improvement (CQI) projects.**

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

OVERVIEW OF EVALUATION AND TREATMENT PROCESS



[a]The Problem List of the NCCN Distress Thermometer Screening Tool may be modified to fit the needs of the local population.
[b]See Discussion (MS-8) for information about other validated screening tools.
[c]Consider referral for palliative care management (See NCCN Guidelines for Palliative Care and NCCN Guidelines for Adult Cancer Pain).
[d]See Psychosocial Distress Patient Characteristics (DIS-B).
[e]Psychiatrist, psychologist, advanced practice clinicians, and/or social worker.

Refer to NCCN Guidelines Table of Contents for Supportive Care Guidelines

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

MANAGEMENT OF EXPECTED DISTRESS SYMPTOMS

EXPECTED DISTRESS SYMPTOMS[d]

- Fear and worry about the future
- Concerns about illness
- Sadness about loss of usual health
- Anger, feeling out of control
- Poor sleep
- Poor appetite
- Poor concentration
- Preoccupation with thoughts of illness and death
- Concerns with disease or treatment side effects
- Concerns about social role (ie, as father, mother)
- Spiritual/existential concerns
- Financial worries

→

INTERVENTIONS

- Acknowledge/validate distress
- Clarify diagnosis, treatment options, and side effects
  - Be sure patient understands disease and treatment options
  - Discuss advance care planning
  - Refer to appropriate patient education materials (eg, NCCN Guidelines for Patients)
- Educate patient that points of transition may bring increased vulnerability to distress
- Ensure continuity of care
- Mobilize resources
- Consider medication to manage symptoms:
  - Analgesics (See NCCN Guidelines for Adult Cancer Pain)
  - Anxiolytics
  - Hypnotics
  - Antidepressants
  - Psychostimulants
- Support groups and/or individual counseling
- Family/couple/caregiver support and counseling
- Relaxation, meditation, creative therapies (eg, art, dance, music)
- Spiritual support
- Exercise
- Assess and strengthen coping strategies

→

RE-EVALUATION

Monitor functional level and reevaluate as appropriate

→ Stable or diminished distress → Continue monitoring and support

→ Increased or persistent distress → See Distress Score ≥4 or moderate to severe distress (DIS-4)

[d] See Psychosocial Distress Patient Characteristics (DIS-B).

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

National Comprehensive Cancer Network®

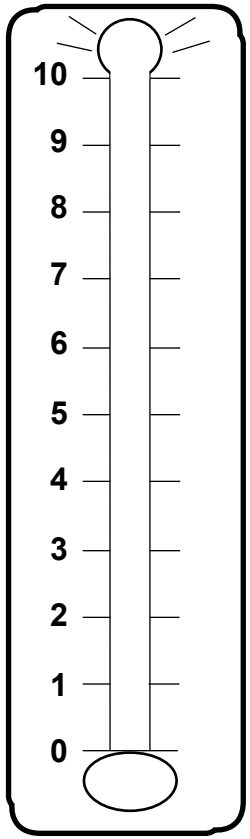
NCCN Guidelines Version 3.2019
Distress Management

NCCN Guidelines Index
Table of Contents
Discussion

NCCN DISTRESS THERMOMETER

Instructions: Please circle the number (0–10) that best describes how much distress you have been experiencing in the past week including today.

Extreme distress



No distress

PROBLEM LIST

Please indicate if any of the following has been a problem for you in the past week including today.
Be sure to check YES or NO for each.

YES	NO	Practical Problems
❑	❑	Child care
❑	❑	Housing
❑	❑	Insurance/financial
❑	❑	Transportation
❑	❑	Work/school
❑	❑	Treatment decisions
		Family Problems
❑	❑	Dealing with children
❑	❑	Dealing with partner
❑	❑	Ability to have children
❑	❑	Family health issues
		Emotional Problems
❑	❑	Depression
❑	❑	Fears
❑	❑	Nervousness
❑	❑	Sadness
❑	❑	Worry
❑	❑	Loss of interest in usual activities
❑	❑	**Spiritual/religious concerns**

YES	NO	Physical Problems
❑	❑	Appearance
❑	❑	Bathing/dressing
❑	❑	Breathing
❑	❑	Changes in urination
❑	❑	Constipation
❑	❑	Diarrhea
❑	❑	Eating
❑	❑	Fatigue
❑	❑	Feeling swollen
❑	❑	Fevers
❑	❑	Getting around
❑	❑	Indigestion
❑	❑	Memory/concentration
❑	❑	Mouth sores
❑	❑	Nausea
❑	❑	Nose dry/congested
❑	❑	Pain
❑	❑	Sexual
❑	❑	Skin dry/itchy
❑	❑	Sleep
❑	❑	Substance use
❑	❑	Tingling in hands/feet

Other Problems: _____

_____

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

PSYCHOSOCIAL DISTRESS PATIENT CHARACTERISTICS[1]

PATIENTS AT INCREASED RISK FOR DISTRESS[2]

- History of psychiatric disorder or substance use disorder
- History of depression/suicide attempt
- Cognitive impairment
- Communication barriers[3]
- Severe comorbid illnesses
- Social issues
  - Family/caregiver conflicts
  - Inadequate social support
  - Living alone
  - Financial problems
  - Limited access to medical care
  - Young or dependent children
  - Younger age[4]
  - History of trauma and/or abuse (physical, sexual, emotional, verbal)
  - Other stressors
- Spiritual/religious concerns
- Uncontrolled symptoms
- Cancer type associated with risk of depression (eg, pancreatic cancer, head and neck cancer)

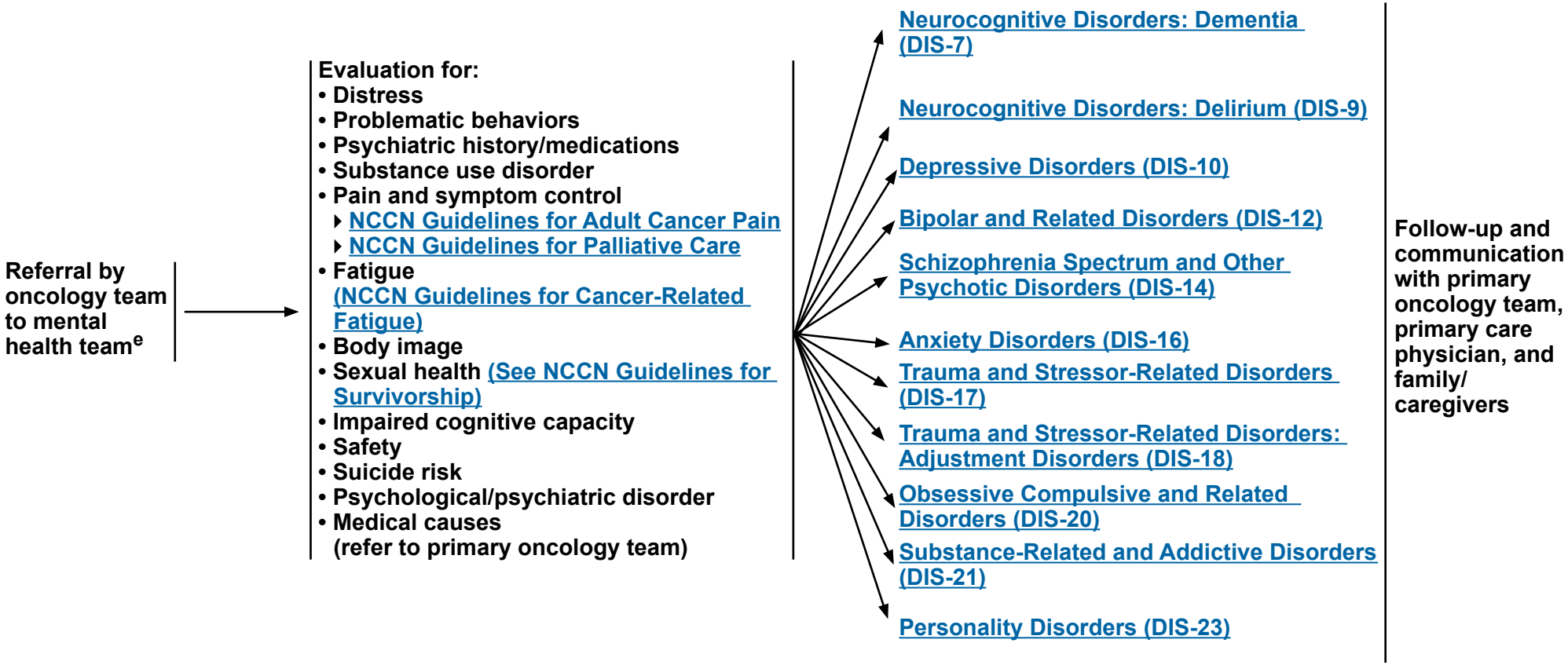
PERIODS OF INCREASED VULNERABILITY

- Finding and investigating a suspicious symptom
- During diagnostic workup
- Finding out the diagnosis
- Advanced cancer diagnosis
- Learning about genetic/familial cancer risk
- Awaiting treatment
- Increase in symptom burden
- Significant treatment-related complication(s)
- Admission to/discharge from hospital
- Change in treatment modality
- Treatment failure
- End of active treatment
- Medical follow-up and surveillance
- Transition to survivorship
- Recurrence/progression
- Transition to end-of-life care

[1]For site-specific symptoms with major psychosocial consequences, see Holland JC, Golant M, Greenberg DB, et al. Psycho-oncology: A quick reference on the psychosocial dimensions of cancer symptom management. Oxford University Press, 2015.
[2]From the NCCN Guidelines for Palliative Care.
[3]Communication barriers include language, literacy, and physical barriers.
[4]See NCCN Guidelines for Adolescent and Young Adult (AYA) Oncology.

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

PSYCHOLOGICAL/PSYCHIATRIC TREATMENT GUIDELINES

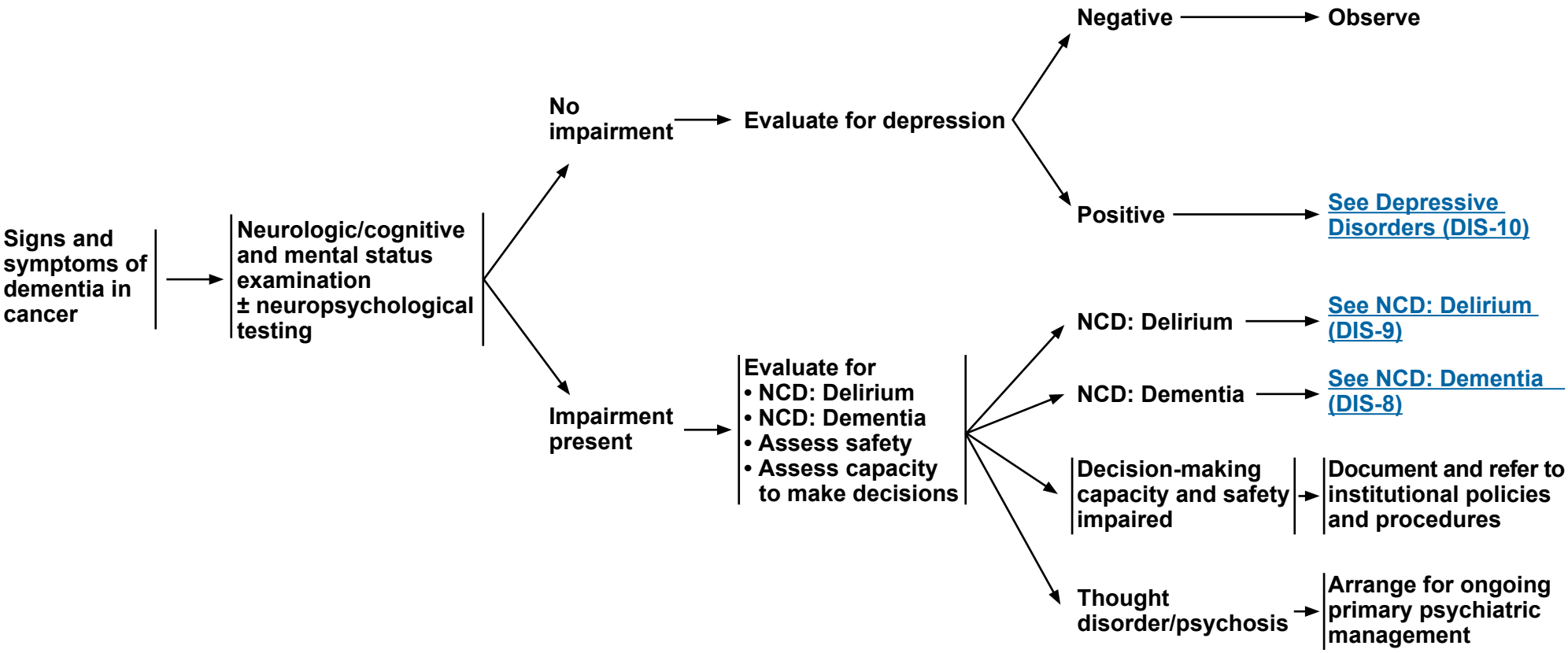


[e]Psychiatrist, psychologist, advanced practice clinicians, and/or social worker.

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

NEUROCOGNITIVE DISORDERS (NCD): DEMENTIA

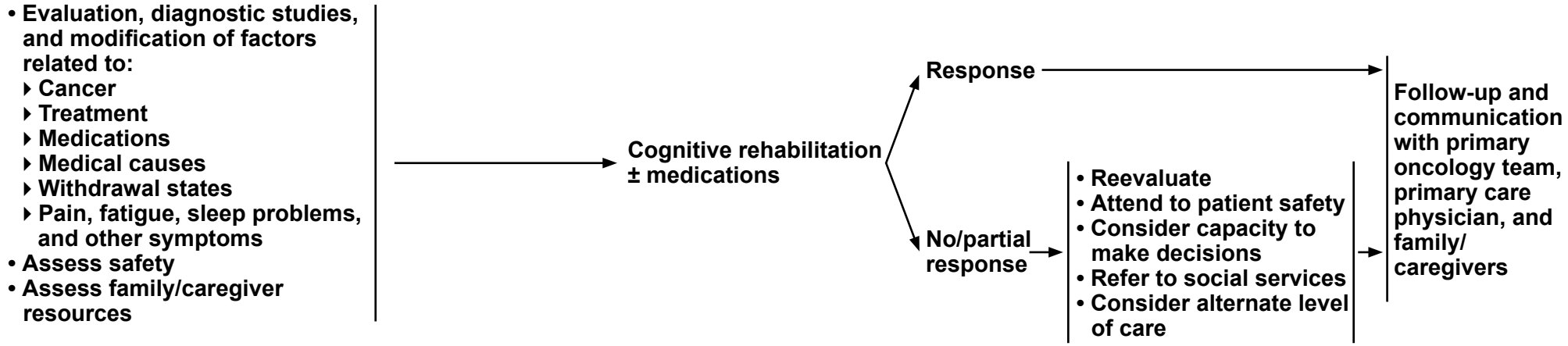
EVALUATION



Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

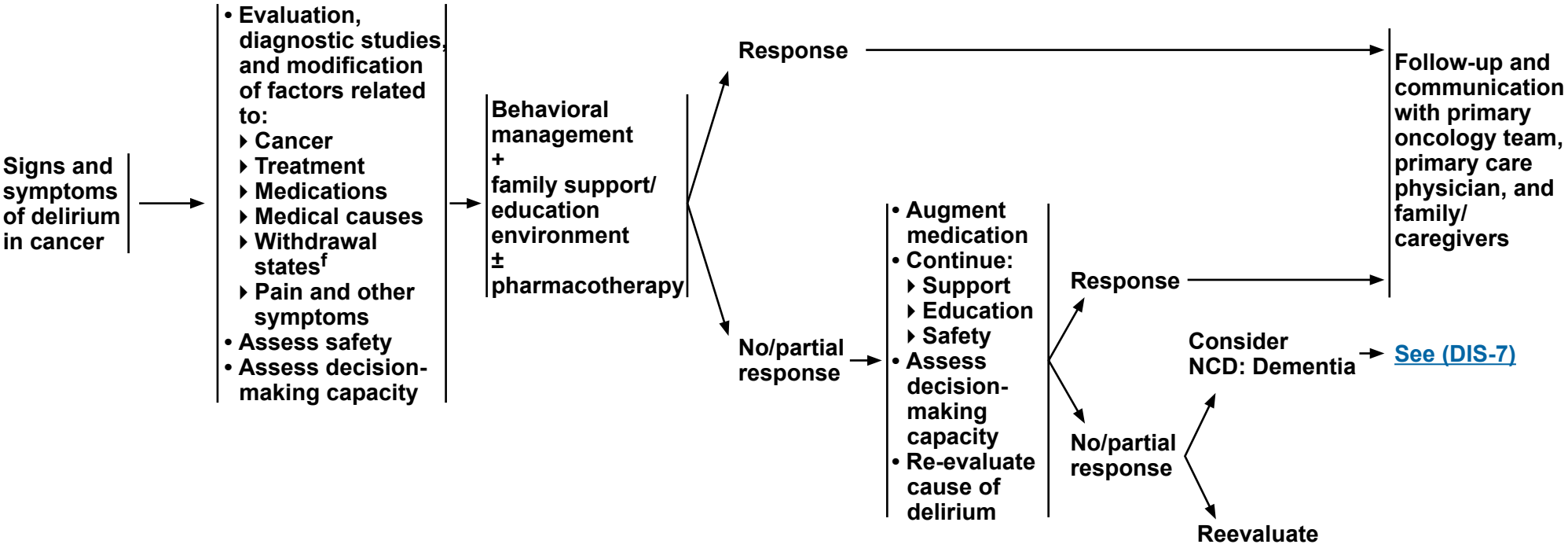
NCD: DEMENTIA | **TREATMENT** | **FOLLOW-UP**



Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

NCD: DELIRIUM **EVALUATION** **TREATMENT** **FOLLOW-UP**



[f]Management of withdrawal states may vary depending upon the substance.

Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

DEPRESSIVE DISORDERS

Signs and symptoms of depressive disorders in cancer including:
- Depressive disorders related to medical illness
- Major depressive disorders
- Persistent depressive disorder

EVALUATION

- Evaluation, diagnostic studies, and modification of factors related to:
  - Cancer
  - Treatment
  - Medications
  - Medical causes
  - Withdrawal states
  - Pain
  - Fatigue
  - Sleep disruption
  - Anorexia
  - Anhedonia
  - Decreased interest in activities
  - Wish to die
  - Suicidal thoughts
  - Mood swings
  - Poor concentration
  - Demoralization
- Consider psychosocial and spiritual concerns
- Assess decision-making capacity
- Assess safety
- Evaluate family/home environment
- Evaluate alcohol and recreational drug use
- Evaluate using PHQ-2 or PHQ-9

TREATMENT

No danger to self or others

- Psychotherapy
- Psychotropic medication (category 1)
- Mental health treatment and follow-up/patient and family education
- Consider referral to social work services or chaplaincy care See Social Work and Counseling Services (DIS-24) or Chaplaincy Care (DIS-26)

Response → Follow-up and communication with primary oncology team, primary care physician, and family/ caregivers

No/partial response → See (DIS-11)

Danger to self or others

- Evaluate suicide and homicide risk
- Consider hospitalization
- Assure patient safety:
  - Order psychiatric consultation
  - Increase monitoring
  - Remove guns/ dangerous objects
- Assure safety of others
- Consider referral to social work services or chaplaincy care See Social Work and Counseling Services (DIS-24) or Chaplaincy Care (DIS-26)

→ Mental health treatment and follow-up/patient and family education → Follow-up and communication with primary oncology team, primary care physician, and family/ caregivers

FOLLOW-UP

Follow-up and communication with primary oncology team, primary care physician, and family/ caregivers

Return to Psychological/ Psychiatric Treatment Guidelines (DIS-6)

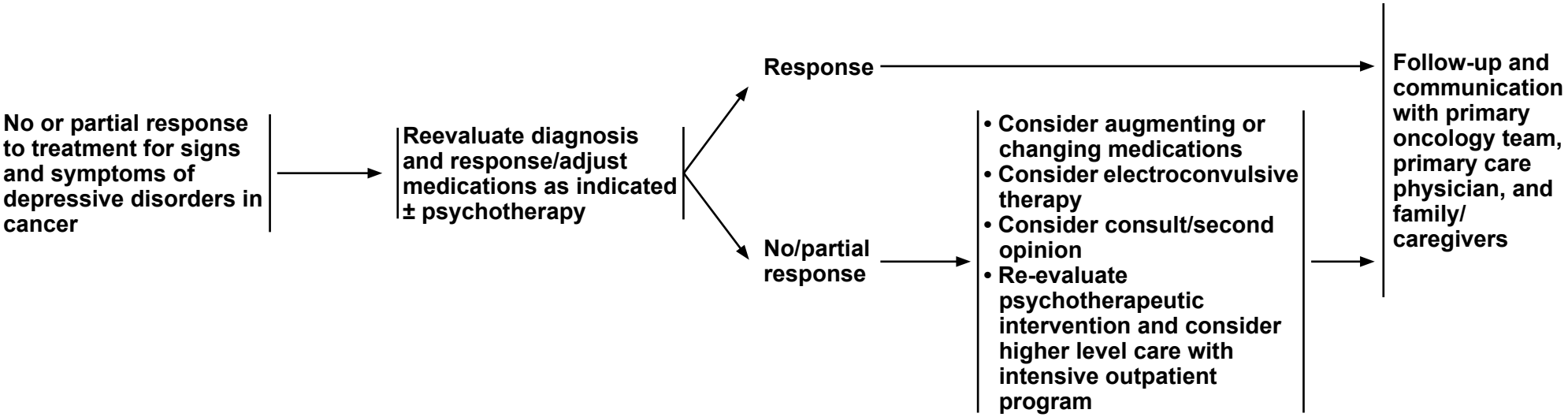
Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

DEPRESSIVE DISORDERS (continued)

EVALUATION

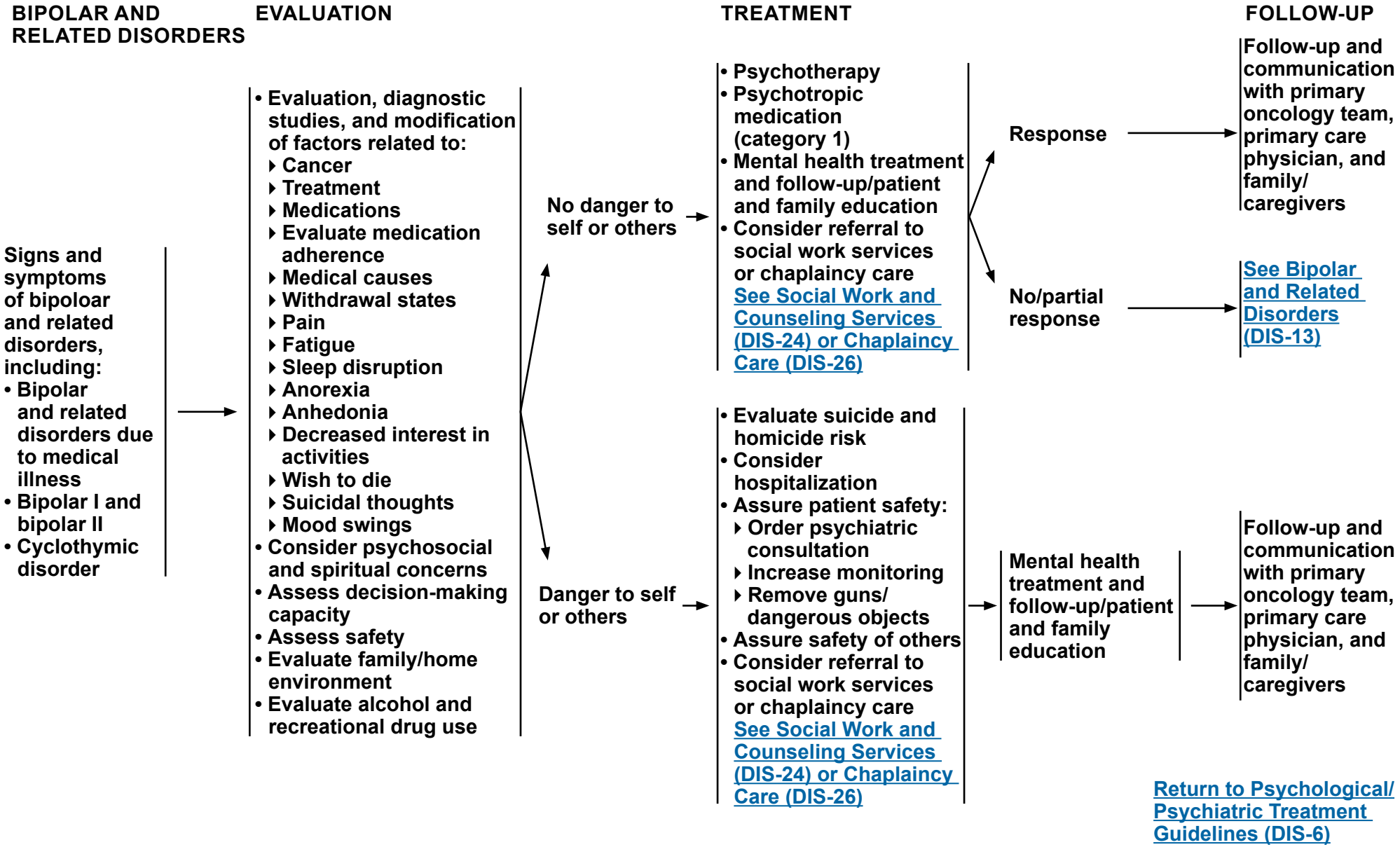
TREATMENT

FOLLOW-UP



Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.



Return to Psychological/ Psychiatric Treatment Guidelines (DIS-6)

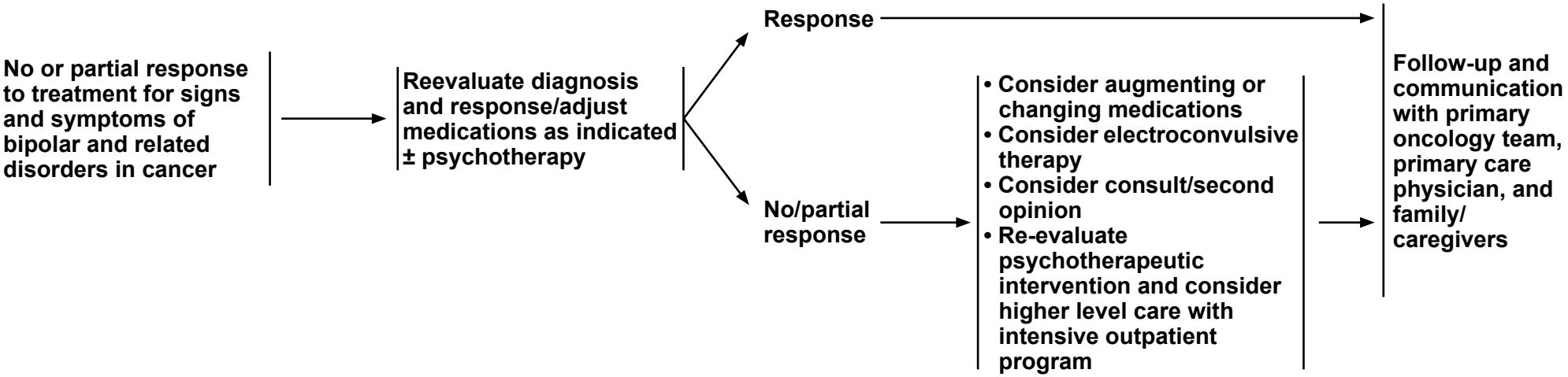
Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

BIPOLAR AND RELATED DISORDERS (continued)

EVALUATION

TREATMENT

FOLLOW-UP

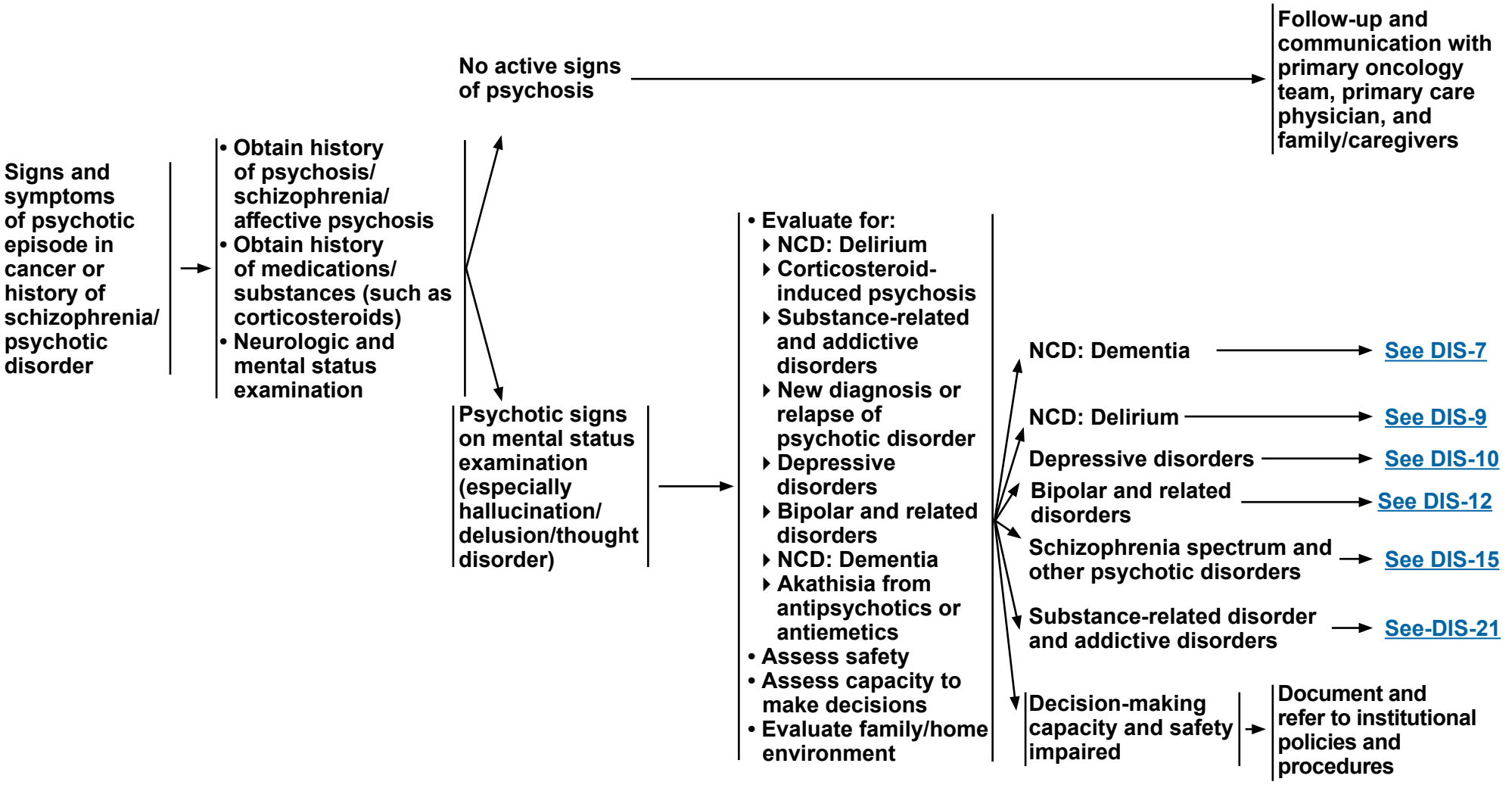


Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

SCHIZOPHRENIA SPECTRUM AND OTHER PSYCHOTIC DISORDERS

EVALUATION



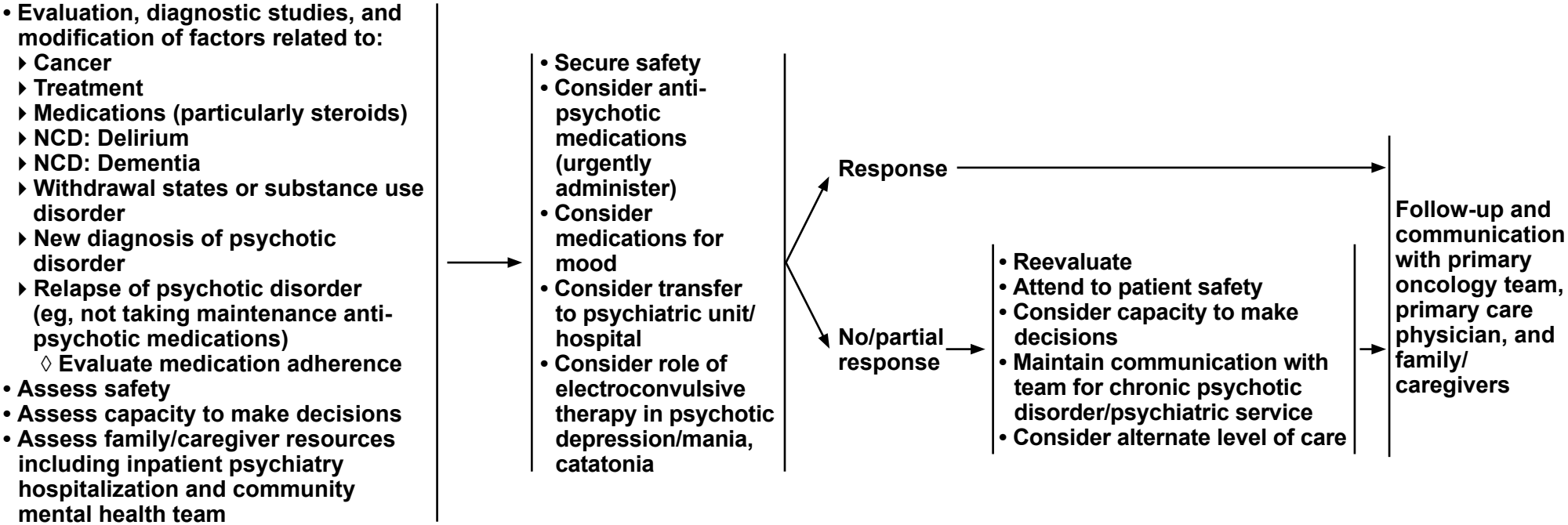
Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

SCHIZOPHRENIA SPECTRUM AND OTHER PSYCHOTIC DISORDERS (continued)

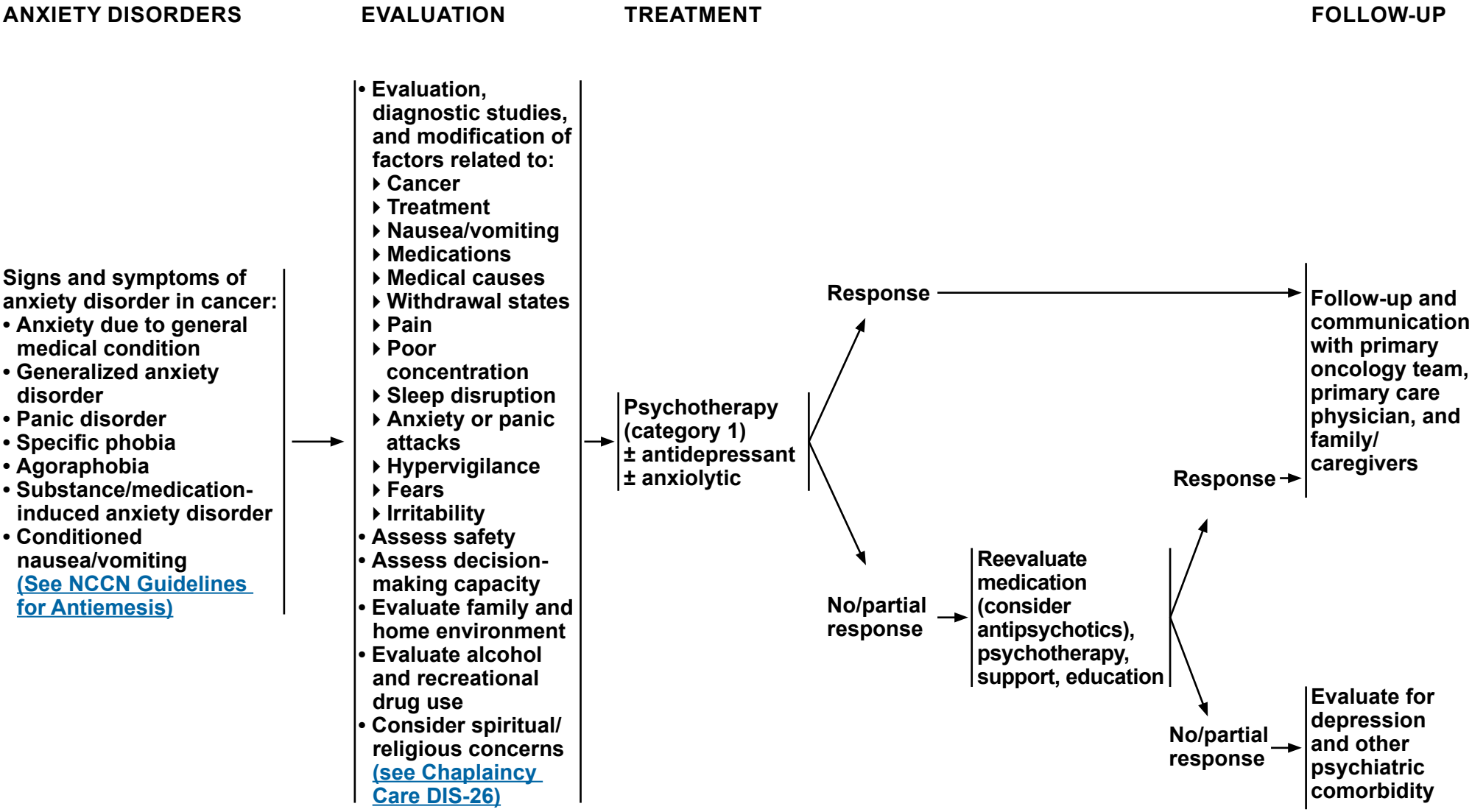
TREATMENT

FOLLOW-UP



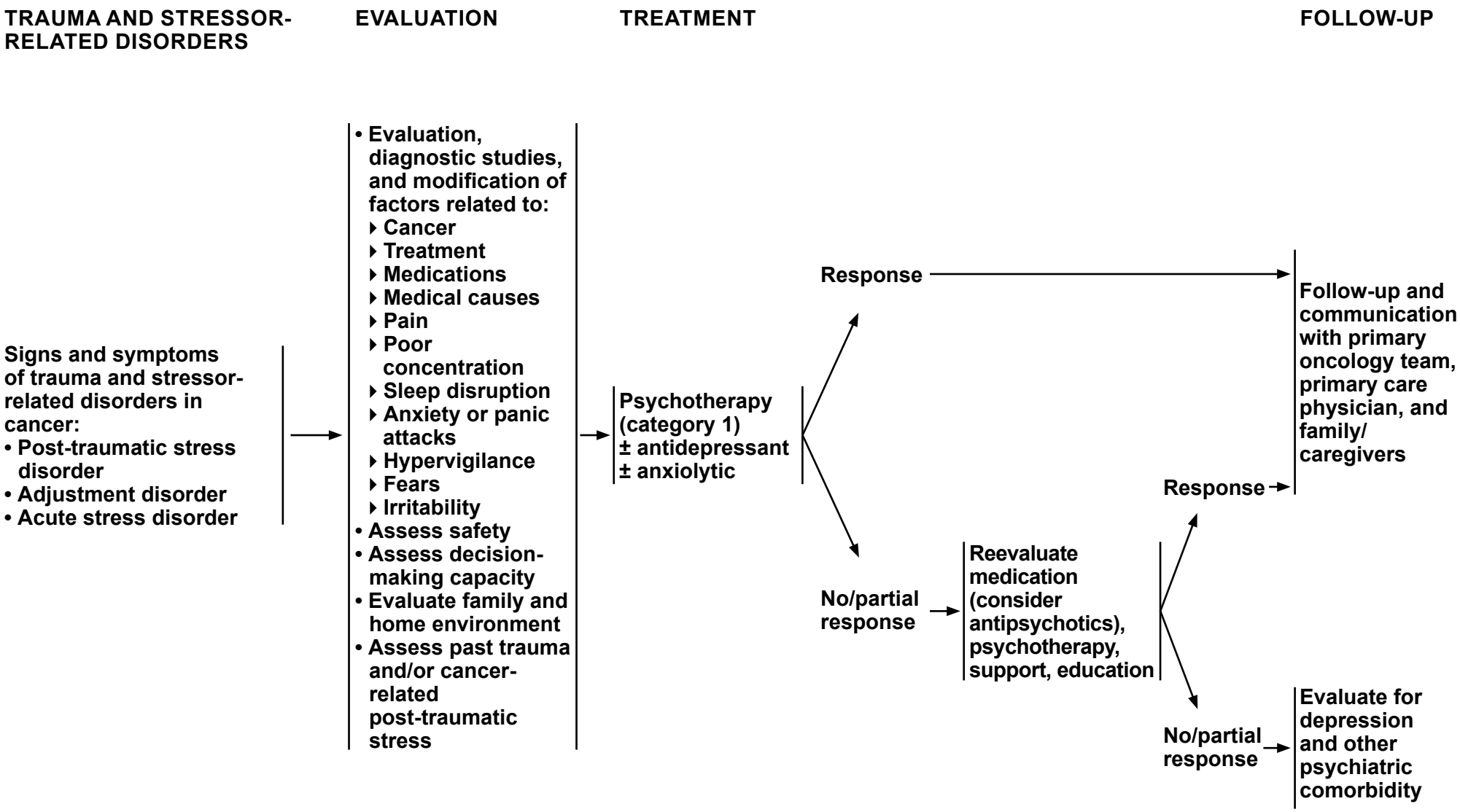
Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.



Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

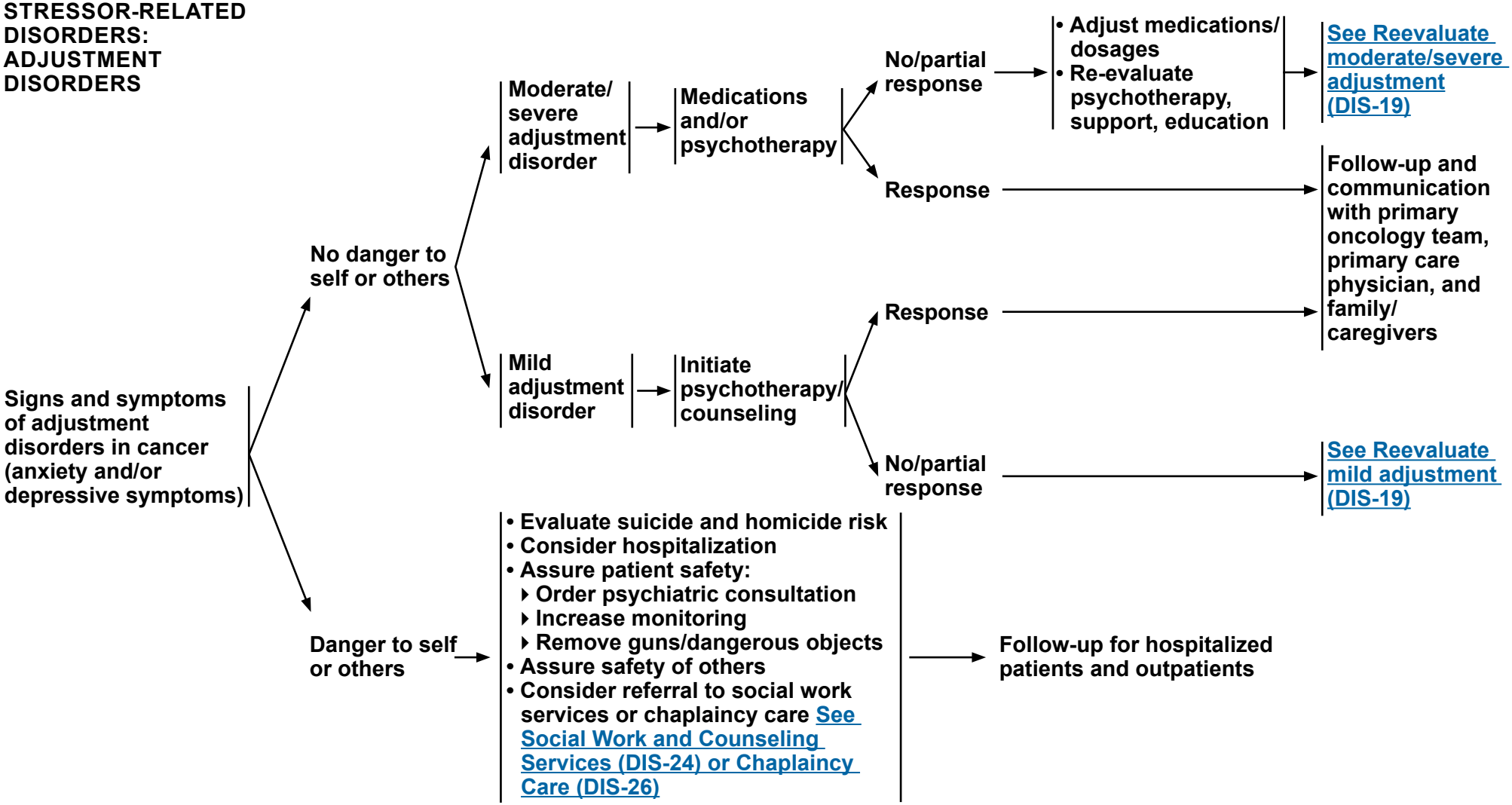
Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.



Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

TRAUMA AND STRESSOR-RELATED DISORDERS: ADJUSTMENT DISORDERS

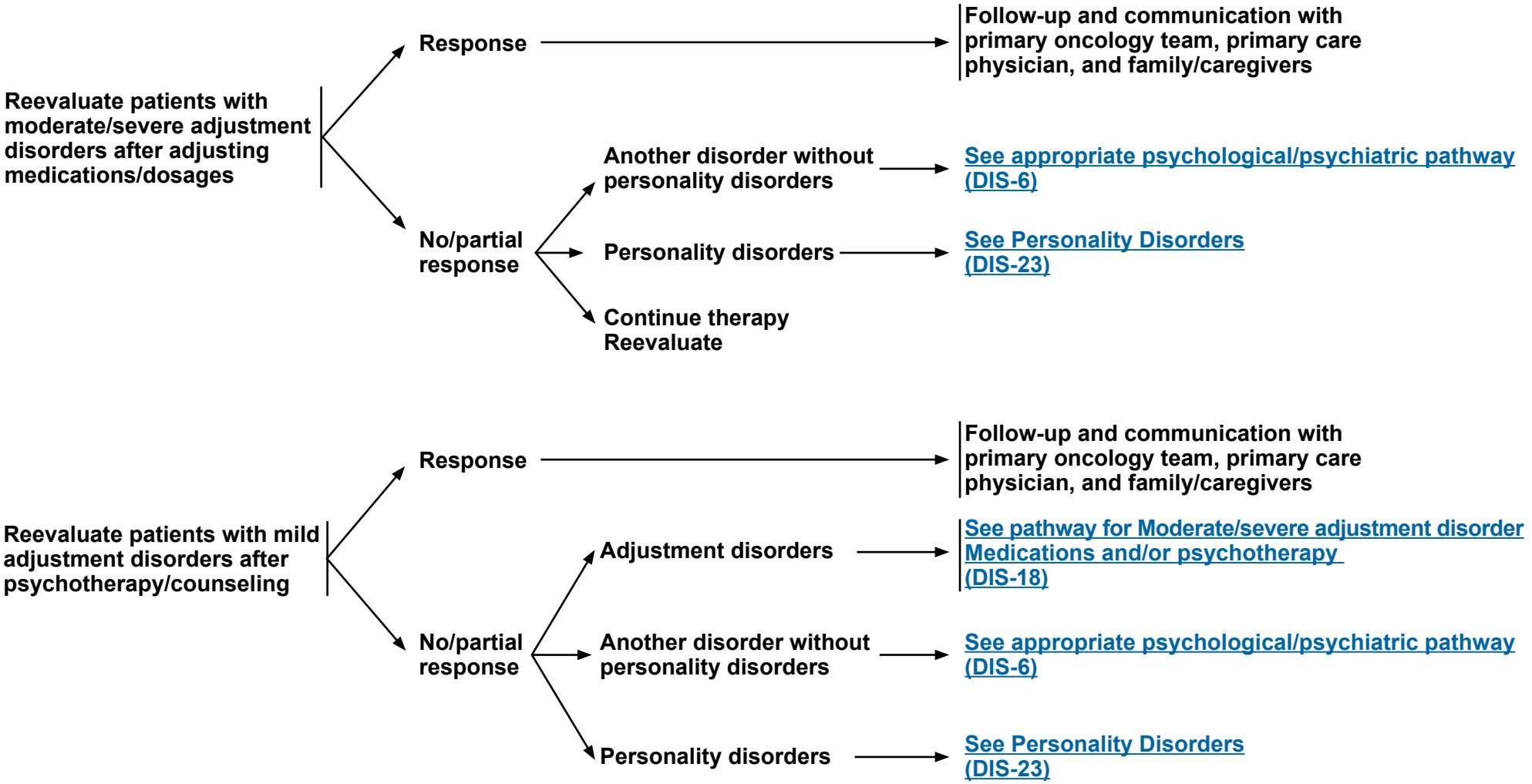


Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

TRAUMA AND STRESSOR-RELATED DISORDERS: ADJUSTMENT DISORDERS (continued)

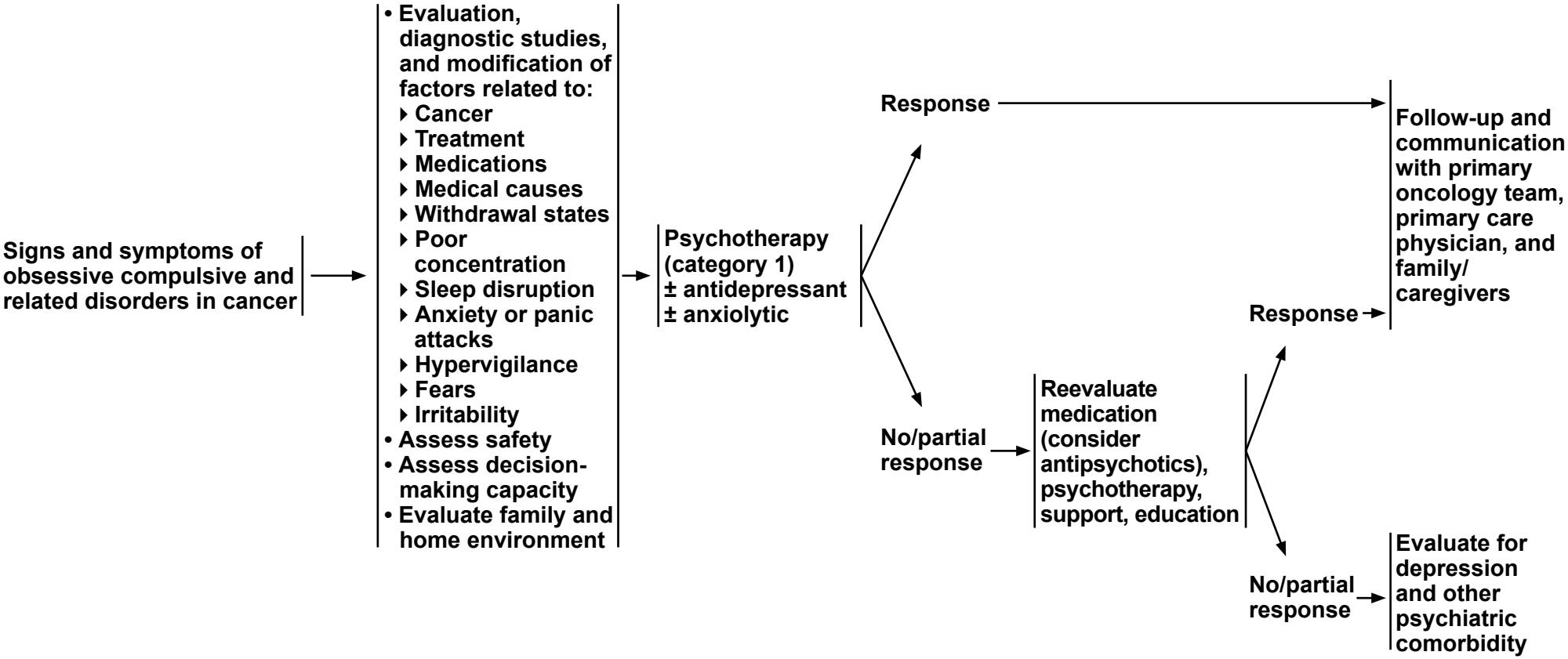
FOLLOW-UP



Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

OBSESSIVE COMPULSIVE AND RELATED DISORDERS



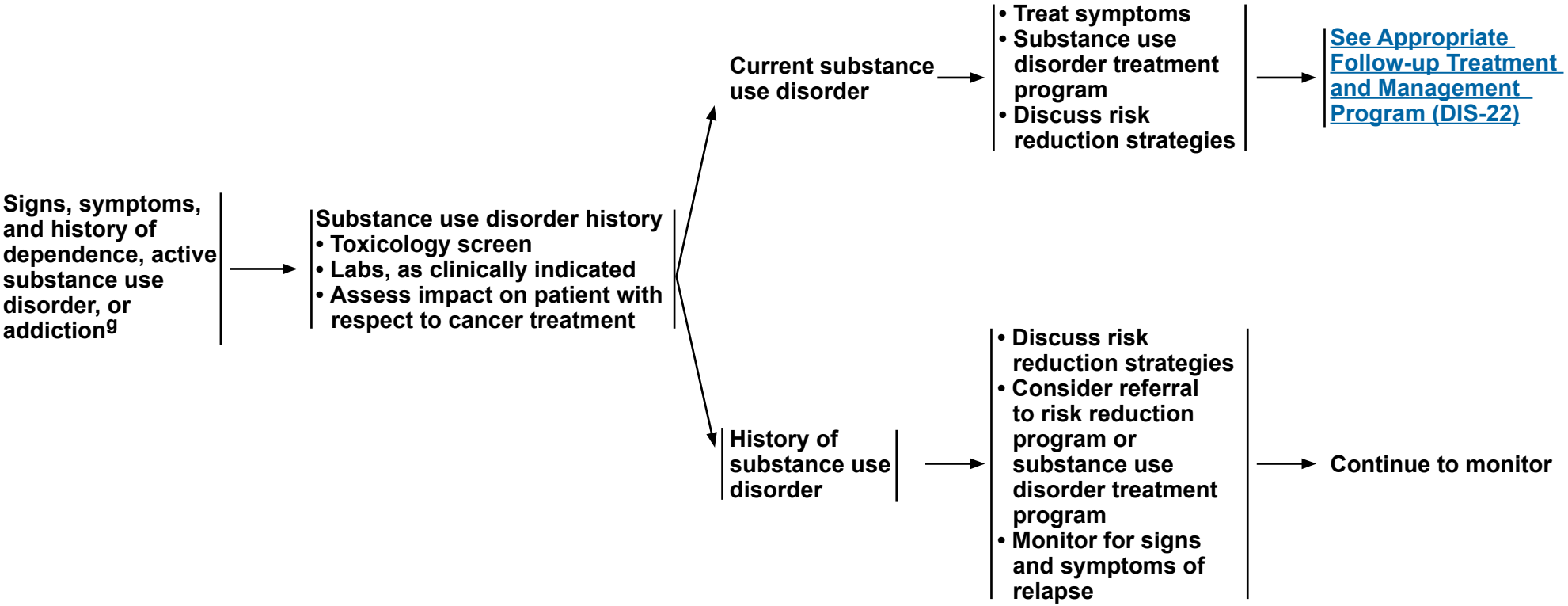
Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

SUBSTANCE-RELATED AND ADDICTIVE DISORDERS

EVALUATION

TREATMENT



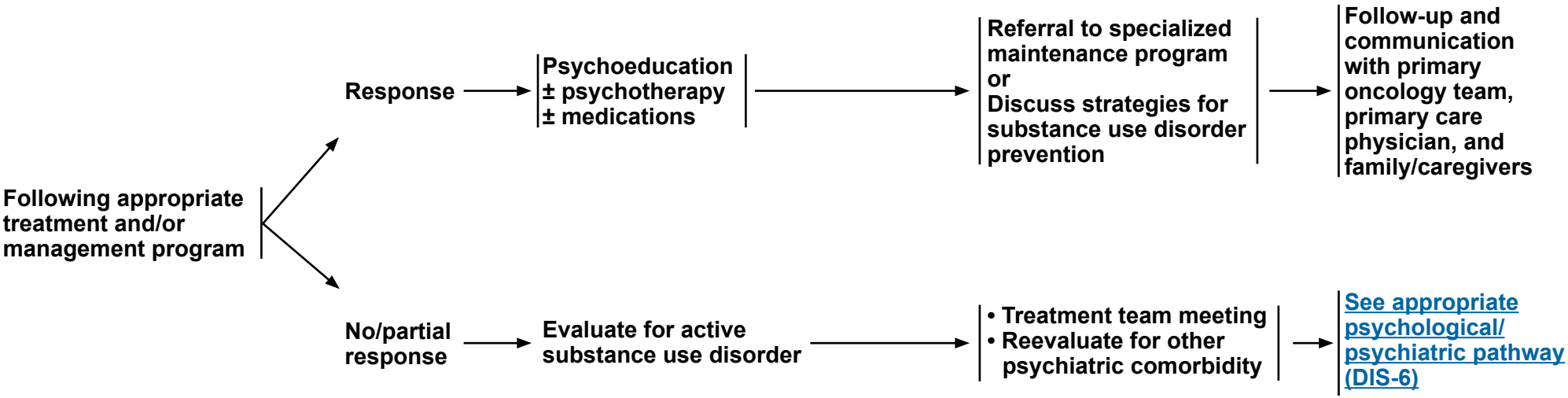
[g]Opioids, alcohol, tobacco, or other. For opioids, also see Opioid Principles, Prescribing, Titration, Maintenance, and Safety in the NCCN Guidelines for Adult Cancer Pain (PAIN-E). For tobacco use see the NCCN Guidelines for Smoking Cessation.

Return to Psychological/ Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

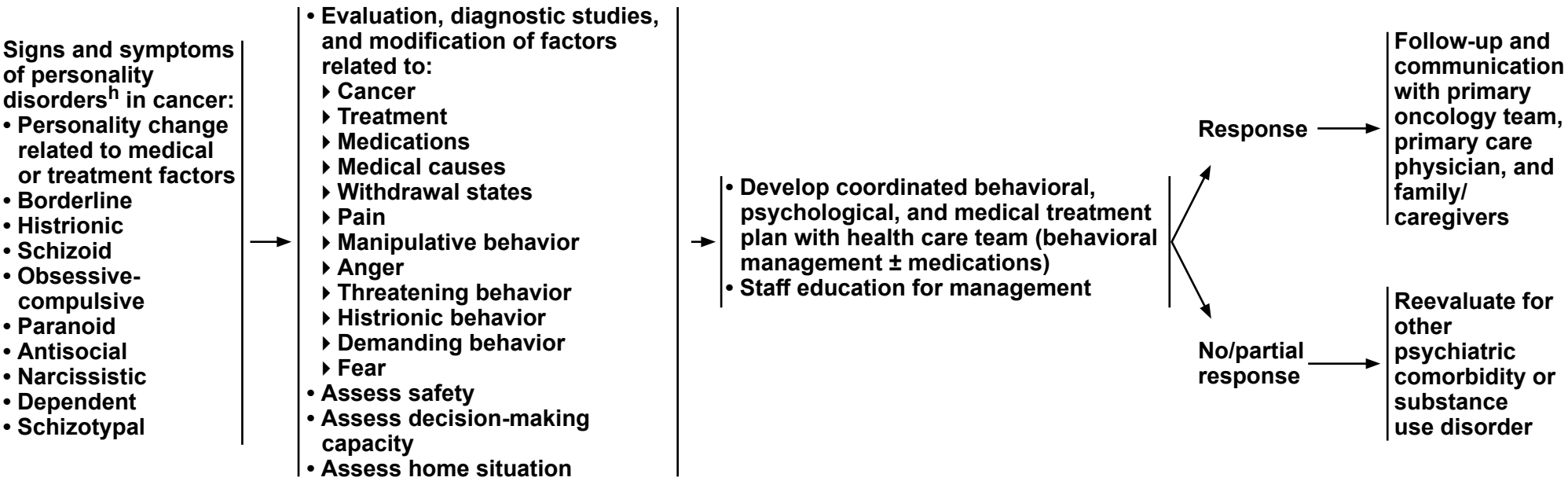
SUBSTANCE-RELATED AND ADDICTIVE DISORDERS (continued)

FOLLOW-UP



Return to Psychological/Psychiatric Treatment Guidelines (DIS-6)

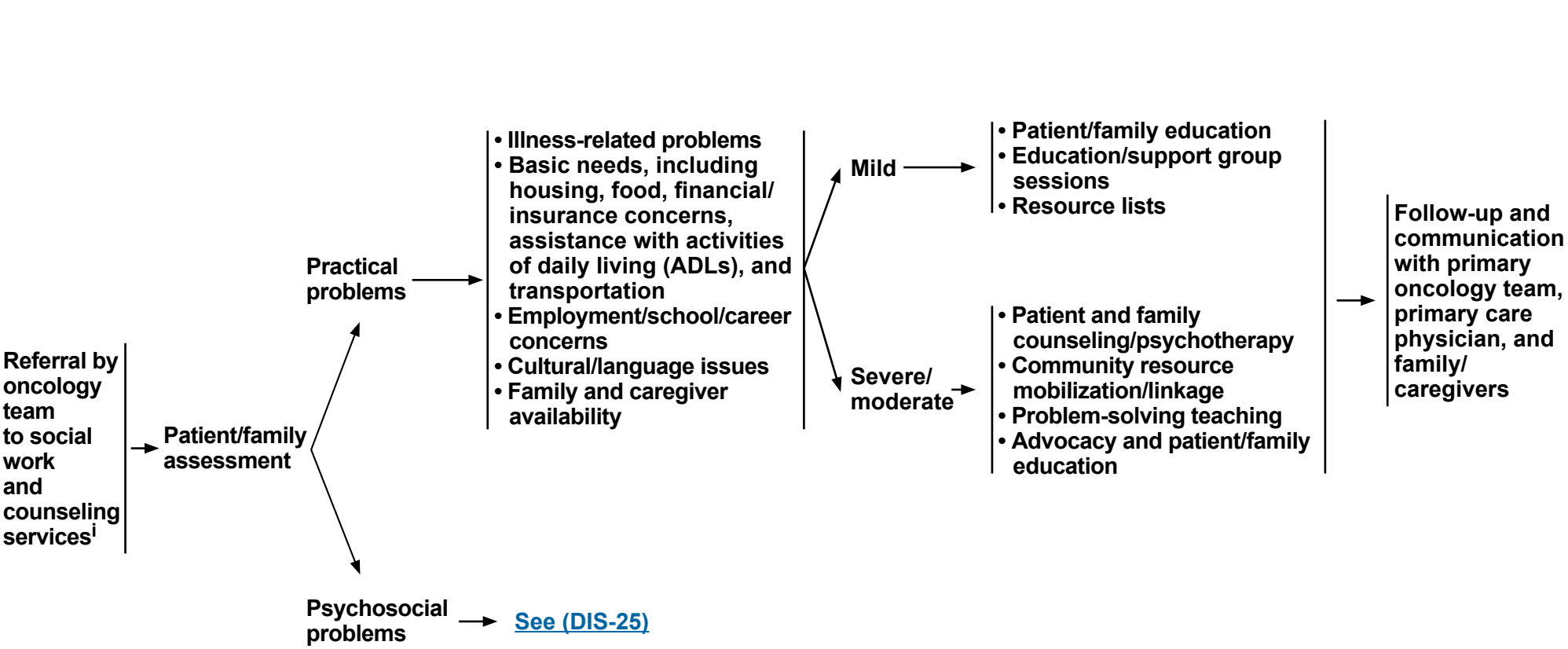
Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.



[h]For a complete list of personality disorders, see the American Psychiatric Association (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: American Psychiatric Publishing.

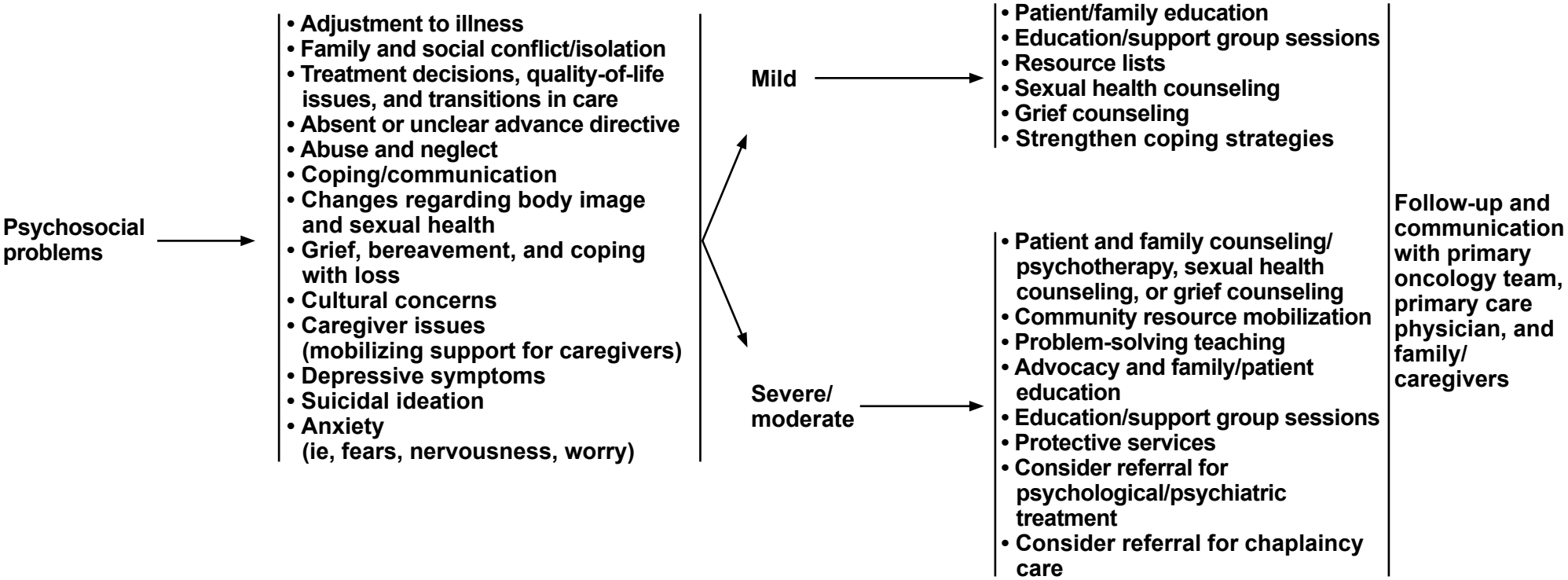
Return to Psychological/ Psychiatric Treatment Guidelines (DIS-6)

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.



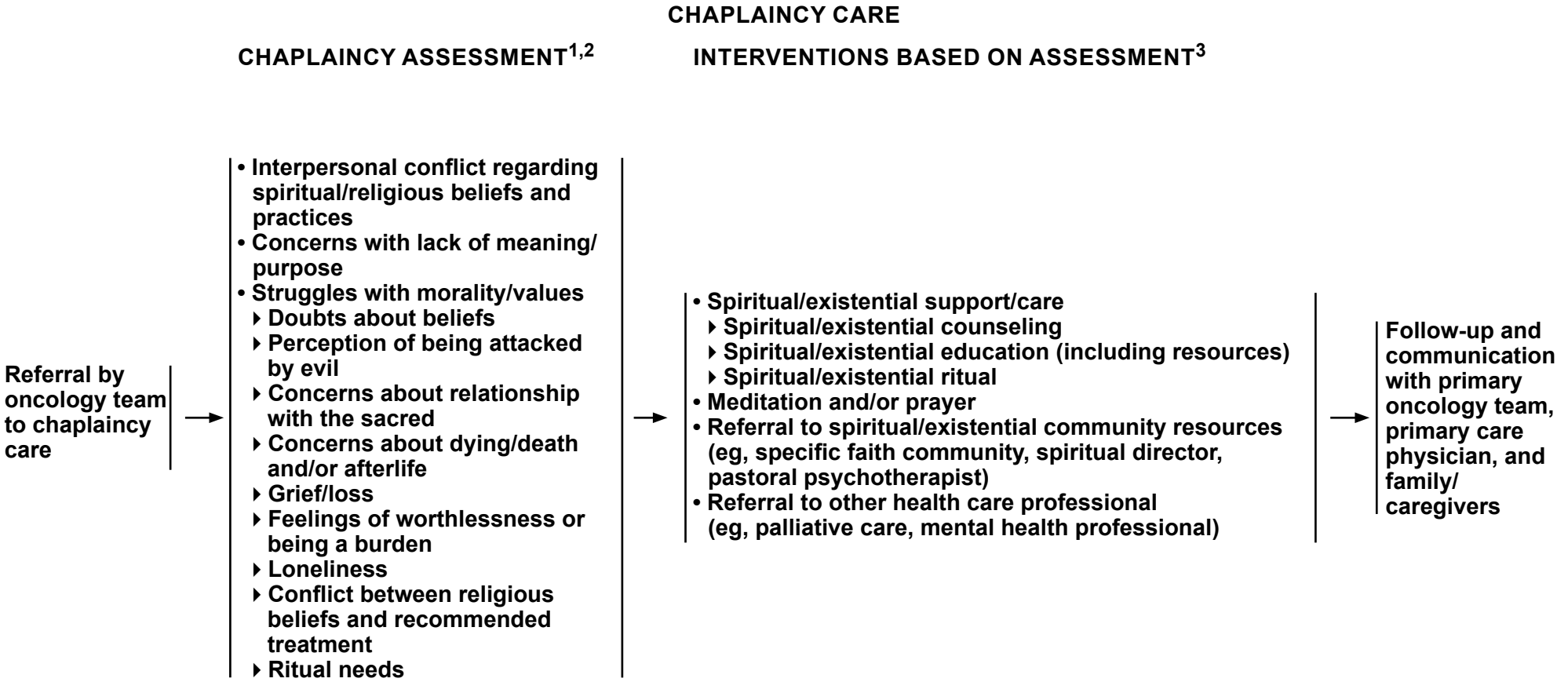
[i]Social work and counseling services include mental health care as described in the psychological/psychiatric treatment guidelines (See DIS-6).

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.



[i]Social work and counseling services include mental health care as described in the psychological/psychiatric treatment guidelines (See DIS-6).

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.



[1]Exline JJ, Pargament KI, Grubbs JB, Yali AM. The Religious and Spiritual Struggles Scale: Development and initial validation. Psychology of Religion and Spirituality 2014;6:208-222.
[2]Lo C, Panday T, Zeppieri J, et al. Preliminary psychometrics of the Existential Distress Scale in patients with advanced cancer. Eur J Cancer Care (Engl) 2017;26.
[3]Spiritual Health Victoria. Spiritual Care Minimum Data Set Framework. Abbotsford, Victoria, Australia; 2015. Available at: http://www.spiritualhealthvictoria.org.au/standards-and-frameworks.

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

PRINCIPLES FOR IMPLEMENTATION OF STANDARDS AND DISTRESS MANAGEMENT GUIDELINES[1-8]

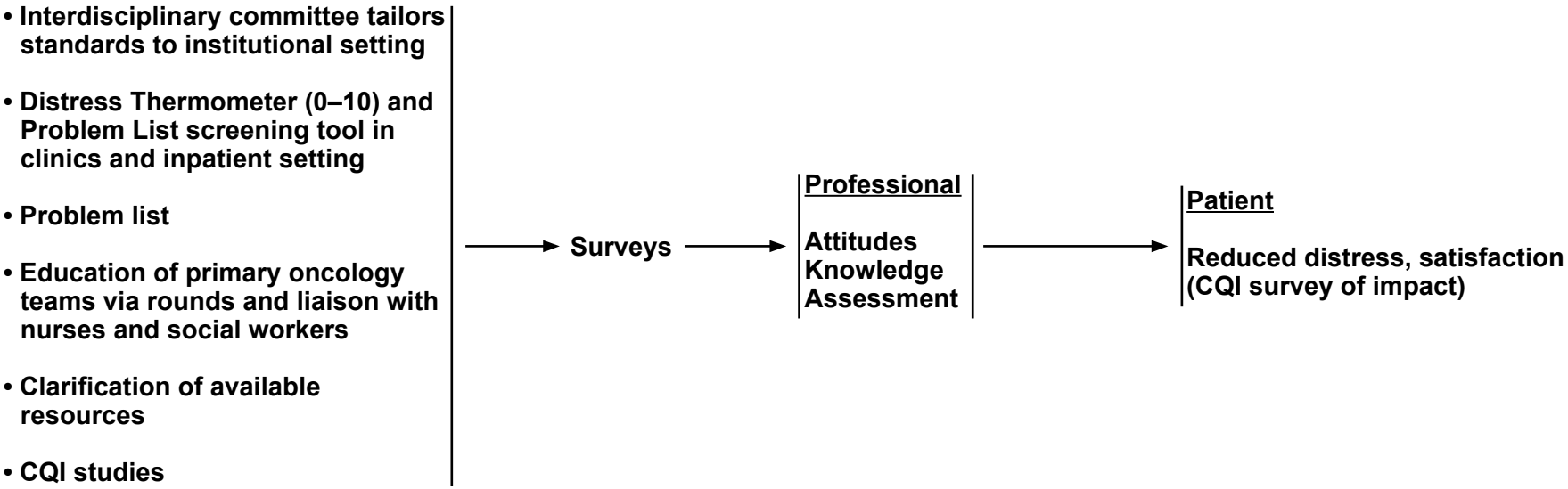
The Commission on Cancer's accreditation standards include screening all patients with cancer for psychosocial distress and referral for psychosocial care as needed.[9]

- **Recommend creation of a work group/cancer committee, which should be composed of multiple disciplines' representatives, including but not limited to physician champions, nurses, psychologists, information technology experts, administrative leadership, social workers, and chaplaincy.**
- **Explicit support and backing of the institutional leadership is essential. The committee should identify and organize advocates and institutional stakeholders who will support the implementation of the program. A small-scale pilot program may be a preferable way to test the screening process before a larger scale implementation is put in place.**
- **The following should be considered:**
  - **Already existing resources (eg, screening tools or programs already in place)**
  - **Current workflows, processes, and available technologies**
- **Various distress screening tools have been developed, including the NCCN Distress Thermometer and Problem List (DIS-A). The cancer committee should select the most appropriate screening tool to be administered in its setting.**
  - **Standardized, validated instruments, or tools with established clinical cutoffs, are recommended.**
  - **Determine the cutoff score or specific problems that will be used to identify distressed patients.**
  - **Determine the frequency of screening.**
  - **Develop a response algorithm (ie, who is alerted to screening results, how information is processed, triggering of appropriate referrals).**
  - **Develop a process in which distress screening results are made known to critical members of the care team, including such strategies as incorporating the results into the patient's medical record.**
  - **Develop results thresholds for generating respective referrals. These may vary based on types of services available and their capacity.**
  - **Consider incorporating distress screening into the institutions' quality improvement and assessment process (eg, distress screening becomes a measurable quality metric).**
  - **Distress screening and response to results data should be tracked and can be used for further improvements, as well as expansion of needed services.**

[1]Ehlers SL, Davis K, Bluethmann SM, et al. Screening for psychosocial distress among patients with cancer: implications for clinical practice, healthcare policy, and dissemination to enhance cancer survivorship. Transl Behav Med 2018.
[2]Smith SK, Loscalzo M, Mayer C, Rosenstein DL. Best practices in oncology distress management: Beyond the screen. Am Soc Clin Oncol Educ Book 2018:813-821.
[3]Ercolano E, Hoffman E, Tan H, et al. Managing psychosocial distress: Lessons learned in optimizing screening program implementation. Oncology (Williston Park) 2018;32:488-490, 492-493.
[4]Rodin G. From evidence to implementation: The global challenge for psychosocial oncology. Psychooncology 2018;27:2310-2316.
[5]Knies AK, Jutagir DR, Ercolano E, et al. Barriers and facilitators to implementing the commission on cancer's distress screening program standard. Palliat Support Care 2018:1-9.
[6]Fitch MI, Ashbury F, Nicoll I. Reflections on the implementation of screening for distress (sixth vital sign) in Canada: key lessons learned. Support Care Cancer 2018;26:4011-4020.
[7]McCarter K, Britton B, Baker AL, et al. Interventions to improve screening and appropriate referral of patients with cancer for psychosocial distress: systematic review. BMJ Open 2018;8:e017959.
[8]Grassi L, Spiegel D, Riba M. Advancing psychosocial care in cancer patients. F1000Res 2017;6:2083.
[9]American College of Surgeons Commission on Cancer. Cancer Program Standards: Ensuring Patient-Centered Care; 2016. Available at: https://www.facs.org/quality-programs/cancer/coc/standards.

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

INSTITUTIONAL EVALUATION OF STANDARDS OF CARE[l]



[l]Based on implementation/evaluation of pain management guidelines.

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

Discussion

NCCN Categories of Evidence and Consensus

Category 1: Based upon high-level evidence, there is uniform NCCN consensus that the intervention is appropriate.

Category 2A: Based upon lower-level evidence, there is uniform NCCN consensus that the intervention is appropriate.

Category 2B: Based upon lower-level evidence, there is NCCN consensus that the intervention is appropriate.

Category 3: Based upon any level of evidence, there is major NCCN disagreement that the intervention is appropriate.

All recommendations are category 2A unless otherwise indicated.

Table of Contents

Overview MS-2
Literature Search Criteria and Guidelines Update Methodology MS-2
Psychosocial Problems in Patients with Cancer MS-2
  Barriers to Distress Management in Cancer MS-3
NCCN Guidelines® for Distress Management MS-4
The New Standard of Care for Distress Management in Cancer MS-4
Recommendations for Implementation of Standards and Guidelines MS-6
Screening Tools for Distress and Meeting Psychosocial Needs MS-8
  The Distress Thermometer MS-8
  The Problem List MS-9
    Cognitive Impairment MS-10
    Fertility MS-11
    Substance Use Disorder MS-11
    Financial Worries MS-11
Initial Evaluation and Treatment by Oncology Team MS-11
Psychological/Psychiatric Treatment by Mental Health Professionals MS-13
  Psychosocial Interventions MS-13
    Cognitive Behavioral Therapy MS-13
    Supportive Psychotherapy MS-14
    Psychoeducation MS-14
    Family and Couples Therapy MS-15
  Pharmacologic Interventions MS-16
  Complementary and/or Integrative Therapies MS-16
Psychological/Psychiatric Treatment Guidelines MS-17
  Neurocognitive Disorders MS-18
  Depressive and Bipolar-Related Disorders MS-18
  Schizophrenia Spectrum and Other Psychotic Disorders MS-19
  Anxiety Disorders and Obsessive Compulsive and Related Disorders MS-20
  Trauma- and Stressor-Related Disorders MS-20
  Substance-Related and Addictive Disorders MS-21
  Personality Disorders MS-22
Social Work and Counseling Services MS-22
Spiritual and Chaplaincy Care MS-22
Oncologist Burnout MS-23
The *Journal of Clinical Oncology* Special Series on Psychosocial Care in Cancer MS-24
Summary MS-24
References MS-26

Overview

In the United States, it is estimated that a total of 1,762,450 new cancer cases and 606,880 deaths from cancer will occur in 2019.[1] All patients experience some level of distress associated with the cancer diagnosis and the effects of the disease and its treatment regardless of the stage of disease. Distress can result from the reaction to the cancer diagnosis and to the various transitions throughout the trajectory of the disease, including during survivorship. Clinically significant levels of distress occur in a subset of patients, and identification and treatment of distress are of utmost importance.

These NCCN Guidelines for Distress Management discuss the identification and treatment of psychosocial problems in patients with cancer. They are intended to assist oncology teams to identify patients who require referral to psychosocial resources and to give oncology teams guidance on interventions for patients with mild distress. These guidelines also provide guidance for social workers, certified chaplains, and mental health professionals by describing treatments and interventions for various psychosocial problems as they relate to patients with cancer.

Literature Search Criteria and Guidelines Update Methodology

Prior to the update of this version of the NCCN Guidelines for Distress Management, an electronic search of the PubMed database was performed to obtain key literature, using the following search terms: (cancer distress) or (cancer depression) or (cancer anxiety) or (cancer dementia) or (cancer delirium) or (cancer depressive) or (cancer bipolar) (cancer post-traumatic stress) or (cancer acute stress) or (cancer adjustment disorder) or (cancer obsessive-compulsive disorder) or (cancer panic disorder) or (cancer schizophrenia) or (cancer psychotic disorder) or (cancer substance abuse) or (cancer substance dependence) or (cancer substance addiction) (cancer personality disorder) or (cancer social work) or (cancer spiritual) or (cancer chaplain). The PubMed database was chosen because it remains the most widely used resource for medical literature and indexes peer-reviewed biomedical literature.[2]

The search results were narrowed by selecting studies in humans published in English. Results were confined to the following article types: Clinical Trial, Phase II; Clinical Trial, Phase III; Clinical Trial, Phase IV; Guideline; Practice Guidelines; Randomized Controlled Trials; Meta-Analysis; Systematic Reviews; and Validation Studies.

The data from key PubMed articles and articles from additional sources deemed as relevant to these guidelines and discussed by the panel have been included in this version of the Discussion section (eg, e-publications ahead of print, meeting abstracts). Recommendations for which high-level evidence is lacking are based on the panel's review of lower-level evidence and expert opinion.

The complete details of the Development and Update of the NCCN Guidelines are available on the NCCN website (available at www.NCCN.org).

Psychosocial Problems in Patients with Cancer

In recent decades, dramatic advances in early detection and treatment options have increased the overall survival rates in patients of all ages with cancer. At the same time, these improved treatment options are also associated with substantial long-term side effects that interfere with patients' ability to perform daily activities, such as fatigue, pain, anxiety, and depression. In addition, the physiologic effects of cancer itself and certain anti-cancer drugs can also be non-psychological contributors to distress symptoms.[3-6] Furthermore, patients with cancer may have pre-existing psychological or psychiatric conditions that impact their ability to cope with cancer. Survivors of cancer are about twice as likely to report

medication use for anxiety and depression as adults who don't have a personal history of cancer.[7]

Overall, surveys have found that 20% to 52% of patients show a significant level of distress.[8-10] A meta-analysis reported that 30% to 40% of patients with various types of cancer have some combination of mood disorders.[11] The prevalence of psychological distress in individuals varies by the type and stage of cancer as well as by patient age, gender, and race.[12] Further, the prevalence of distress, depression, and psychiatric disorders has been studied in many sites and stages of cancer.[13-20] A review of studies that assessed the prevalence of depression in patients with cancer showed that the highest prevalence was in patients with oropharyngeal cancer (22%–57%) and pancreatic cancer (33%–50%).[18] In a study of 4496 patients with cancer, Zabora and colleagues reported that the highest prevalence rates of distress were found in patients with cancers of the lung (43.4%) and brain (42.7%)[21].

Patients at increased risk for moderate or severe distress are those with a history of psychiatric disorder, depression, or substance use disorder and those with cognitive impairment, severe comorbid illnesses, uncontrolled symptoms, communication barriers, or social issues. Social issues/risk factors include younger age, living alone, having young children, and prior trauma and/or abuse (physical, sexual, emotional, and/or verbal). Learning about genetic/familial risk of cancer is also associated with distress.[22,23]

Distress is a risk factor for non-adherence to treatment, especially with oral medications. In women with primary breast cancer, Partridge and colleagues observed that the overall adherence to tamoxifen decreased to 50% in the fourth year of therapy and nearly one fourth of patients may be at risk of inadequate clinical response due to poor adherence.[24] In a meta-analysis, DiMatteo and colleagues found that noncompliance was 3 times greater in depressed patients compared to non-depressed patients.[25] In addition to decreased adherence to treatment, failure to recognize and treat distress may lead to several problems: patients may have trouble making decisions about treatment and may make extra visits to the physician's office and emergency room, which takes more time and causes greater stress to the oncology team.[26,27] An analysis of 1036 patients with advanced cancer showed that distress is associated with longer hospital stays (P = .04).[28] Distress in patients with cancer also leads to poorer quality of life and may even negatively impact survival.[18,29-32] Furthermore, survivors with untreated distress have poorer compliance with surveillance screenings and are less likely to exercise and quit smoking.[33]

Early evaluation and screening for distress leads to early and timely management of psychological distress, which in turn improves medical management.[34,35] A randomized study showed that routine screening for distress, with referral to psychosocial resources as needed, led to lower levels of distress at 3 months than did screening without personalized triage for referrals.[36] Those with the highest level of initial distress benefitted the most. In addition, there is evidence from randomized trials that psychologically effective interventions may lead to a survival advantage in patients with cancer.[37-39] Overall, early detection and treatment of distress lead to:

- better adherence to treatment,
- better communication,
- fewer calls and visits to the oncologist's office, and
- avoidance of patients' anger and development of severe anxiety or depression.

Barriers to Distress Management in Cancer

Less than half of distressed patients with cancer are actually identified and referred for psychosocial help.[40,41] Many patients with cancer who are in need of psychosocial care are not able to get the help they need because of the under-recognition of patients' psychological needs by the primary

oncology team and lack of knowledge of community resources.[42] The need is particularly acute in community oncologists' practices where there are few to no psychosocial resources.

An additional barrier to patients receiving the psychosocial care they require is the stigma associated with psychological problems. For many centuries, patients were not told their diagnosis of cancer due to the stigma attached to the disease. Since the 1970s, this situation has changed and patients are well aware of their diagnosis and treatment options.[43] However, patients are reluctant to reveal emotional problems to the oncologist. The words "psychological," "psychiatric," and "emotional" are as stigmatizing as the word "cancer." The word "distress" is less stigmatizing and more acceptable to patients and oncologists than these terms, but psychological issues remain stigmatized even in the context of coping with cancer. Consequently, patients often do not tell their physicians about their distress and physicians do not inquire about the psychological concerns of their patients. The recognition of patients' distress has become more difficult as cancer care has shifted to the ambulatory setting, where visits are often short and rushed. These barriers prevent distress from receiving the attention it deserves, despite the fact that distress management is a critical component of the total care of the person with cancer.

NCCN Guidelines® for Distress Management

A major milestone in the improvement of psychosocial care in oncology was made by NCCN when it established a panel to develop clinical practice guidelines, using the NCCN format. The panel began to meet in 1997 as an interdisciplinary group. The clinical disciplines involved were: oncology, nursing, social work and counseling, psychiatry, psychology, and clergy. A patient advocate was also on the panel. Traditionally, clergy have not been included on NCCN Guidelines panels, but NCCN recognized that many distressed patients prefer to speak with a certified chaplain.[44]

The first step was to understand why this area has been so difficult to develop. The panel members decided that words like "psychiatric" or "psychological" are stigmatizing; patients and oncologists were reluctant to label any symptoms or patients as such. The way around this barrier was developed by using a term that would feel "normal" and non-stigmatizing. This led to the first published guidelines in 1999 for the management of *distress* in patients with cancer. This accomplishment provided a benchmark, which has been used as a framework in the handbook for oncology clinicians published by the IPOS (International Psycho-Oncology Society) Press.[45]

The panel defines distress as a multifactorial, unpleasant experience of a psychological (ie, cognitive, behavioral, emotional), social, spiritual, and/or physical nature that may interfere with the ability to cope effectively with cancer, its physical symptoms, and its treatment. Distress extends along a continuum, ranging from common, normal feelings of vulnerability, sadness, and fears to problems that can become disabling, such as depression, anxiety, panic, social isolation, and existential and spiritual crisis.

Recommendations in the guidelines are based on evidence and on consensus among panel members. In addition to the guidelines for oncologists, the panel established guidelines for social workers, certified chaplains, and mental health professionals (psychologists, psychiatrists, psychiatric social workers, and psychiatric nurses).

The New Standard of Care for Distress Management in Cancer

Psychosocial care had not been considered as an aspect of quality cancer care until the publication of a 2007 National Academy of Medicine

(formerly the Institute of Medicine) report, *Cancer Care for the Whole Patient*,[46] which is based on the pioneering work of the NCCN Panel. Psychosocial care is part of the standard for quality cancer care and should be integrated into routine care.[46-48] The National Academy of Medicine (NAM) report supported the work of the NCCN Guidelines for Distress Management by proposing a model for the effective delivery of psychosocial health services that could be implemented in any community oncology practice:

- Screening for distress and psychosocial needs;
- Making and implementing a treatment plan to address these needs;
- Referring to services as needed for psychosocial care; and
- Reevaluating, with plan adjustment as appropriate.

In August 2012, the Commission on Cancer (CoC) of the American College of Surgeons (ACS) released new accreditation standards for hospital cancer programs. Their patient-centered focus now includes screening all patients with cancer for psychosocial distress. These standards are required for accreditation, were enacted in 2015, and were updated in 2016 (https://www.facs.org/quality-programs/cancer/coc/standards). According to the updated accreditation standards, institutions are expected to document and monitor their distress screening process.

The standards of care for managing distress proposed by the NCCN Distress Management Panel are broad in nature and should be tailored to the particular needs of each institution and group of patients. The overriding goal of these standards is to ensure that no patient with distress goes unrecognized and untreated. The panel based these standards of care on quality improvement guidelines for the treatment of pain.[49] The standards of care developed by the NCCN Distress Management Panel, which can also be found in the guidelines, are:

- Distress should be recognized, monitored, documented, and treated promptly at all stages of disease and in all settings.
- Screening should identify the level and nature of the distress.
- Ideally, patients should be screened for distress at every medical visit as a hallmark of patient-centered care. At a minimum, patients should be screened to ascertain their level of distress at the initial visit, at appropriate intervals, and as clinically indicated, especially with changes in disease status (eg, remission, recurrence, or progression; treatment-related complications).
- Distress should be assessed and managed according to clinical practice guidelines.
- Interdisciplinary institutional committees should be formed to implement standards for distress management.
- Educational and training programs should be developed to ensure that health care professionals and certified chaplains have knowledge and skills in the assessment and management of distress.
- Licensed mental health professionals and certified chaplains experienced in the psychosocial aspects of cancer should be readily available as staff members or by referral.
- Medical care contracts should include adequate reimbursement for services provided by mental health professionals.
- Clinical health outcomes measurements should include assessment of the psychosocial domain (eg, quality of life; patient and family satisfaction).
- Patients, families, and treatment teams should be informed that distress management is an integral part of total medical care and includes appropriate information about psychosocial services in the treatment center and in the community.
- Finally, the quality of distress management programs/services should be included in institutional continuous quality improvement (CQI) projects.

Patients and families should be made aware that this new standard exists and that they should expect it in their oncologist's practice. The website for the Alliance for Quality Psychosocial Cancer Care, a coalition of professional and advocacy organizations whose goal is to advance the recommendations from the NAM report, has hundreds of psychosocial resources for health care professionals, patients, and caregivers, searchable by state (http://www.wholecancerpatient.org/). NCCN Guidelines for Patients® for managing distress have also been developed, based on the NCCN Clinical Practice Guidelines (available at www.NCCN.org).

Recommendations for Implementation of Standards and Guidelines

Jacobsen and colleagues conducted a study in 2005 evaluating the implementation of NCCN Guidelines for Distress Management by 15 NCCN Member Institutions.[50] Eight institutions (53%) conducted routine distress screening of some patient populations, and an additional 4 institutions (27%) also performed pilot testing of screening strategies. However, concordance to NCCN Guidelines (defined as screening all outpatients) was observed in only 20% of the NCCN Member Institutions at that time. A follow-up survey was conducted 7 years later that found increased levels of screening.[51] As of 2012, 14 of 20 responding NCCN Member Institutions (70%) performed routine screening for distress in at least some patient populations. Half of responding centers reported having screened all outpatients for distress. Another survey of 233 APOS members and APOS meeting attendees, representing 146 U.S. institutions, found that routine distress screening was not performed at a majority of cancer centers.[52] In this survey, 51% of cancer care organizations performed routine screening for distress in newly diagnosed patients with cancer. A 2013–2014 survey of applicants for a distress screening cancer education program, spanning 70 institutions, showed that fewer than half of these institutions had not yet begun distress screening.[53] A 2014 survey of 55 cancer centers in the United States and Canada showed that adherence to an institution's distress screening protocol (ie, screening with appropriate documentation) occurred 63% of the time.[54]

Surveys of clinical staff have identified barriers to adoption of distress screening and found that time, staff uncertainties, competing demands, and ambiguous accountability are some of the biggest barriers.[55,56] A survey of oncology nurses also found that nurses who were familiar with these NCCN Guidelines for Distress Management were more comfortable discussing distress.[55]

The MD Anderson Cancer Center published a 2010 report on its efforts to implement the integration of psychosocial care into clinical cancer care.[57] The authors outline strategies they used to accomplish the required cultural shift and describe the results of their efforts. Other groups have also described their efforts toward implementing psychosocial screening in various outpatient settings.[58-66] Wagner and colleagues, for example, described efforts at oncology locations in the Chicago area to implement an electronic system that was tested between 2011 and 2012.[65] About one third of patients requested assistance with a psychosocial problem, including stress management and coping with a cancer diagnosis, and the authors deemed the system feasible.

Institutions should have a framework in place to address psychosocial care, in order to effectively manage distress in patients who need it. A 2012 survey completed by 20 NCCN Member Institutions showed most institutions do not formally keep track of the number of patients who utilize psychosocial care and/or services, which limits the ability to ensure that centers are adequately implementing standards of psychosocial care.[67] A 2014 survey of 2134 members of the AOSW who were also employees of a CoC-accredited cancer program showed that most programs now have procedures in place to address psychosocial care and are successful in

identifying psychosocial needs in patients and appropriately addressing these needs.[68] However, programs tend to be less successful with follow-up of psychosocial care and training of providers regarding psychosocial care.

Some initiatives have been developed to assist institutions with implementation of standards for distress screening and psychosocial care. Quality indicators can be used to determine the quality of psychosocial care given by a clinic or office. For example, Jacobsen and colleagues have developed a patient chart audit that permits an oncologist's office or clinic to evaluate the quality of their psychosocial care.[69] The survey queries whether there is documentation that the patient's current emotional well-being has been assessed and if there is documentation that any action has been taken if the patient has been identified as having a problem.

The Quality Oncology Practice Initiative (QOPI) was started in 2002 by ASCO as a pilot project (http://qopi.asco.org/program.html).[70] This program became available to all ASCO member medical oncologists in 2006. Jacobsen's psychosocial quality indicators were added as part of the core measures in the QOPI quality measures in 2008.[71] A 2008 manuscript showed that practices participating in QOPI demonstrated improved performance, with initially low-performing practices showing the greatest improvement.[72] Blayney and colleagues from the University of Michigan Rogel Cancer Center reported that QOPI can be adapted for use in practice improvement at an academic medical center.[73] APOS has also adopted these quality indicators.[74]

Additional guidance for the implementation and dissemination of the new NAM standards has been published.[66,75-81] In Canada, routine psychosocial care is part of the standard of care for patients with cancer; emotional distress is considered the sixth vital sign that is checked routinely along with pulse, respiration, blood pressure, temperature, and pain.[26,82] A national approach has been used to implement screening for distress in Canada. Its strategies have been described.[83,84] Groups in Italy, France, the Netherlands, and Japan have also described results of their preliminary efforts toward the implementation of psychosocial distress screening.[85-88]

The panel has identified some principles of implementation to guide institutions in development of a distress screening protocol and process for appropriate referral and follow-up. These principles include the following:

- Creation of an interdisciplinary work group/committee, which ideally would include physicians, nurses, psychologists, information technology experts, social workers, chaplains, and administrative leadership
- Mandatory support from institutional leadership
- Development and execution of a pilot program prior to any large-scale implementation
- Consideration of the institution's already existing resources and current workflow/processes

Distress screening should be considered a measurable quality metric. Therefore, distress screening can be incorporated into institutions' quality improvement and assessment processes. Some results have caused doubt for some regarding the efficacy of distress screening for improving patient outcomes. For instance, a systematic review failed to find evidence that screening improved distress levels over usual care in patients with cancer.[89] Criticisms of this review include the inappropriately narrow inclusion criteria and the focus on only distress as an outcome.[90] An unblinded, two-arm, parallel randomized controlled trial (RCT) that used

the Distress Thermometer (DT) and Problem List (see below) as a screening tool versus usual care found no differences in psychological distress at 12 months between the arms.[91] However, no specific triage algorithms were followed, and inadequate staff training may have prevented effective referral and treatment.[92] Another systematic review found that trials reporting a lack of benefit to distress screening in patients with cancer lacked appropriate follow-up care of distressed patients, while trials that linked screening with mandatory referral or intervention showed improvements in patient outcomes.[93] Overall, results of these studies show that screening, while a critical component of psychosocial care, is not sufficient to impact patient outcomes without adequate follow-up referrals and treatment. Indeed, an RCT examining the effects of screening on 568 patients with cancer receiving radiotherapy showed that screening alone does not significantly impact distress and quality of life, but earlier referral to mental health professionals was associated with better outcomes (ie, greater health-related quality of life, less anxiety).[94] For implementation of a distress screening protocol, an ideal frequency of screening should be identified, and institutions should develop a process for generating referrals and alerting the appropriate staff based on screening results. Whether or not screening is occurring, how often, and whether or not appropriate referrals are generated, should be tracked. This information can be used by institutions to implement improvements in the process and potentially expand needed services.

Identification of a patient's psychological needs is essential to develop a plan to manage those needs.[48] In routine clinical practice, time constraints and the stigma related to psychiatric and psychological needs often inhibit discussion of these needs. It is critical to have a fast and simple screening method that can be used to identify patients who require psychosocial care and/or referral to psychosocial resources. The NCCN Distress Management Panel developed such a rapid screening tool, as discussed below.

Screening Tools for Distress and Meeting Psychosocial Needs

Screening tools have been found to be effective and feasible in reliably identifying distress and the psychosocial needs of patients.[95-99] Completion of a psychosocial screening instrument may lead to earlier referral to social work services.[100] Mitchell and colleagues reported that ultra-short screening methods (Patient Health Questionnaire-2 [PHQ-2] or the DT) were acceptable to about three quarters of clinicians.[101,102] Other screening tools have also been described.[103] Automated touch screen technologies, interactive voice response, and web-based assessments have also been used for psychosocial and symptom screening of patients with cancer.[104-107] An internet-based program that includes distress screening, reporting, referrals, and follow-up components was validated in a trial of 319 community-based cancer survivors and showed good psychometric properties.[108]

The Distress Thermometer

The NCCN Distress Management Panel developed the DT, a now well-known tool for initial screening, which is similar to the successful rating scale used to measure pain: 0 (no distress) to 10 (extreme distress). The DT serves as a rough, initial, single-item question screen, which identifies distress coming from any source, even if unrelated to cancer. The DT can be administered in a variety of settings, such as through a patient portal or given by a receptionist or medical assistant.

The word "distress" was chosen as described above, because it is less stigmatizing and more acceptable to patients and oncologists than other terms such as psychiatric, psychosocial, or emotional. Using this non-stigmatizing word diminishes clinicians' concerns that the patient will be embarrassed or offended by these questions. Asking an objective question such as, "How is your pain today on a scale of 0 to 10?" makes it easier and more comfortable for caregivers to learn about patients' pain.

Similarly, asking patients, “How is your distress today on a scale of 0 to 10?” opens a dialogue with the oncologist or nurse for a discussion about emotions that is more acceptable.

The patient places a mark on the DT scale in response to the following question: “How distressed have you been during the past week on a scale of 0 to 10?” Scores of 4 or higher suggest a level of distress that has clinical significance. If the patient’s distress level is mild (score is <4 on the DT), the primary oncology team may choose to manage the concerns by usual clinical supportive care management. If the patient’s distress level is 4 or higher, a member of the oncology team looks at the Problem List (see below) to identify key issues of concern and asks further questions to determine the best resources (mental health, social work and counseling, or chaplaincy professionals) to address the patient’s concerns.

The DT has been validated by many studies in patients with different types of cancer, in different settings, and in different languages, cultures, and countries. The DT has shown good sensitivity and specificity. A meta-analysis of 42 studies with greater than 14,000 patients with cancer found the pooled sensitivity of the DT to be 81% (95% CI, 0.79–0.82) and the pooled specificity to be 72% (95% CI, 0.71–0.72) at a cut-off score of 4.[109] However, an analysis including 181 Dutch women who completed the DT within one month following breast cancer diagnosis showed that sensitivity was 95% and specificity was only 45% when the recommended cut-off score of 4 was used.[110] Study investigators suggested that a cut-off score of 7 was optimal, with sensitivity being 73% and specificity being 84%. Using a higher cut-off score would reduce the number of false positives.

The DT is also a useful tool for screening distress among bone marrow transplant recipients.[111,112] The DT had acceptable overall accuracy and greater sensitivity and specificity when compared to the Center for Epidemiologic Studies Depression Scale (CES-D) in the assessment of depression in patients undergoing bone marrow transplants.[111]

While the DT is not a screening tool for psychiatric disorders, it has demonstrated concordance with the Hospital Anxiety and Depression Scale (HADS)[95,113-129] and the Depression Anxiety and Stress Scale-21.[130] A recent trial including 463 patients with cancer showed that the DT does not accurately detect mood disorders (based on DSM-IV criteria; AUC = 0.59), compared to the PHQ-2 (AUC = 0.83 with a cut-off score of ≥3) and PHQ-9 (AUC = 0.85 with a cut-off score of >9), which are both validated for screening patients with depressive symptoms.[131]

The NCCN DT and Problem List (discussed below) are freely available for non-commercial use. In addition, the NCCN patient website includes a patient-friendly description of distress with a copy of the tool (http://www.nccn.org/patients/resources/life_with_cancer/distress.aspx). NCCN also has verified translations of the DT and Problem List in various languages that are freely available online (https://www.nccn.org/global/international_adaptations.aspx).

The Problem List

The screening tool developed by the NCCN Distress Management Panel includes a 39-item Problem List, which is on the same page as the DT. The Problem List asks patients to identify their problems in 5 different categories: practical, family, emotional, spiritual/religious, and physical. The panel notes that the Problem List may be modified to fit the needs of the local population.

An analysis of the DT and Problem List including principal component analysis, logistic regression, and classification and regression tree analyses showed that endorsement of Problem List items associated with emotion (ie, sadness, worry, depression, fears, nervousness, sleep), physical function (ie, transportation, bathing/dressing, breathing, fatigue, getting around, memory/concentration, pain), and support (ie, spiritual/religious concerns, insurance/finances, dealing with partner) were

significantly associated with moderate or severe distress ($P < .001$, $P = .003$, and $P = .013$, respectively).[132] Two studies validated a version of the DT with an expanded problems list.[133,134] Tuinman and colleagues validated the DT with the 46-item Problem List in a cross-sectional group of 227 patients with cancer.[134] Graves and colleagues validated the DT with an adapted problems list with two new problem categories (information concerns and cognitive problems) in patients with lung cancer.[133]

Cognitive Impairment

"Memory/concentration problems" is one item on the Problem List. Cognitive impairment is common in patients with primary central nervous system (CNS) cancers, due to the effects of brain tumors themselves and the effects of treatment targeted to the brain.[135,136] Evidence has shown that chemotherapy-related cognitive dysfunction is also prevalent in patients with non-CNS cancers and without brain metastases.[137-141] Chemotherapy can cause subtle cognitive changes, which have been studied primarily in patients with breast cancer or lymphoma. These changes can continue over years and at times, when more severe, can impact quality of life and function. One study, however, showed that patients with breast cancer who received systemic adjuvant therapy did not report significantly greater cognitive impairment 7 to 9 years after treatment, compared to patients with breast cancer who did not receive systemic adjuvant therapy ($N = 1889$), when statistically controlling for menopausal status and sociodemographic and clinical covariates.[142] The underlying mechanisms for chemotherapy-induced cognitive changes are not known. Studies have reported elevated levels of cytokines or DNA damage as some of the possible mechanisms.[143] Furthermore, changes in brain activity have been observed in patients following chemotherapy, suggesting that direct damage to the brain may contribute to chemotherapy-induced cognitive decline.[144]

Evidence suggests that cancer itself and therapies other than chemotherapy, such as hormone therapy, can cause cognitive impairments in patients with cancer.[145-148] A meta-analysis including 14 studies with 417 prostate cancer patients showed that androgen deprivation therapy negatively impacts performance of visuomotor tasks.[149] A national cross-sectional study found that a history of cancer is independently associated with a 40% increase in the likelihood of self-reported memory problems.[150] A case-control study ($N = 226$) showed that patients with breast cancer may experience some cognitive impairment prior to beginning treatment, and this impairment may be due to post-traumatic stress symptoms.[151,152] A better understanding of the mechanisms that cause cancer-related cognitive impairment is essential for the development of treatments to improve cognitive function and quality of life in patients with cancer.[135,136,153]

There is no standard treatment for the management of cognitive changes in patients with cancer, and intervention studies to date have been limited by methodologic flaws such as a small sample size, poor generalizability, and lack of a proper control group.[139,154] Cognitive behavioral therapy (CBT), cognitive rehabilitation programs, compensatory strategy training, and exercise may be effective interventions to improve cognitive function in patients with cancer.[139,154-158] In addition, some studies have shown that the use of psychostimulants such as methylphenidate and modafinil improved cognitive function in patients with cancer.[159-164] Donepezil, a reversible acetylcholinesterase inhibitor (approved to treat mild to moderate dementia in patients with Alzheimer's disease) also improved cognitive function, mood, and health-related quality of life in patients with primary low-grade glioma.[165] Further placebo-controlled trials are needed to confirm these preliminary findings.[139,160]

In October 2006 the International Cognition and Cancer Task Force (ICCTF), comprised of a multidisciplinary group of health professionals

and health advocates, was formed. The mission of ICCTF is to advance understanding of the impact of treatment-related cognitive and behavioral functioning in patients with non-CNS cancers.[166] ICCTF also has a website (www.icctf.com) to provide up-to-date information to both physicians and patients seeking assistance in the management of cognitive symptoms associated with cancer treatment.

The NCCN Guidelines for Survivorship (available at www.NCCN.org) contain more information on this topic, with recommendations for the management of cognitive dysfunction in survivors.

Fertility

Another item on the Problem List is the "ability to have children." Chemotherapy and radiation therapy have an impact on the fertility of patients, especially in those who are of child-bearing age.[167] Therefore, the panel has included "ability to have children" as one of the items listed under the family problems category. The Oncofertility Consortium is a useful patient education resource for those who are concerned about the possible effect of cancer treatment on their fertility (www.MyOncofertility.org). Additionally, the NCCN Guidelines for Adolescent and Young Adult (AYA) Oncology (available at www.NCCN.org) have information on fertility preservation.

Substance Use Disorder

For the 2013 version of these guidelines, the panel added "substance abuse" to the list of possible physical problems. For the 2018 version of the guidelines, the item "substance abuse" was revised to "substance use," consistent with the more neutral terminology used in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM).[168] Substance use disorder in patients with cancer who do not have a history of abuse or addiction is rare and is usually caused by insufficient symptom control. Improving symptom control often alleviates the substance dependence. This problem is discussed in more detail below in *Substance-Related and Addictive Disorders*.

Financial Worries

"Insurance/financial" concerns is included as a practical problem in the Problem List. The impact of "financial toxicity" on cancer care has recently gained attention as an important issue that impacts patients.[169-171] The cost of cancer care and diagnostic workup, as well as reduction in productivity or income due to limited ability to work, contribute to patients' concerns about financial hardship.[169,171,172] Financial worries in cancer survivors may be more common in patients who are younger, uninsured, have a lower income, and were treated recently.[172] It is important for the primary oncology team to be aware of potential financial worries facing patients undergoing distress screening.

Initial Evaluation and Treatment by Oncology Team

The panel recommends that all patients be assessed prior to clinical visits using a simple screening tool. While there are several types of screening tools, the DT and the accompanying Problem List are recommended to assess the level of distress and to identify causes of distress. If the patient's distress is moderate or severe (thermometer score ≥4), the oncology team must recognize that score as a trigger to a second level of questions, including clinical interviews and/or validated scales/screeners for anxiety and depression. A positive screen should prompt referral to a mental health professional, social worker, or spiritual counselor, depending on the problems identified in the Problem List. Common symptoms that require further evaluation are: excessive worries and fears, excessive sadness, unclear thinking, despair and hopelessness, severe family problems, social problems, and spiritual or religious concerns. Any unrelieved physical symptoms should be treated based on NCCN's disease-specific guidelines, and referral for palliative care management

may also be considered (see the NCCN Guidelines for Palliative Care, available at www.NCCN.org).

Mild distress (DT score <4) is routinely managed by the primary oncology team and represents what the panel terms "expected distress" symptoms. The symptoms that the team manages are fear and worry about the future; concerns about the illness; sadness about loss of good health; anger and the feeling that life is out of control; poor sleep, poor appetite, and poor concentration; preoccupation with thoughts of illness, death, treatment, and side effects; concerns about social roles (eg, mother, father); and spiritual or existential concerns. Many patients experience these symptoms at the time of diagnosis and during arduous treatment cycles. They might persist long after the completion of treatment. For instance, minor physical symptoms are often misinterpreted by survivors as a sign of recurrence, which causes fear and anxiety until they are reassured.

The primary oncology team is the first to deal with these distressing problems. The oncologist, nurse, and social worker each have a critical role. First and foremost, a critical component is the quality of the physician's communication with the patient, which should occur in the context of a mutually respectful relationship so that the patient can learn the diagnosis and understand the treatment options and side effects.[173,174] Adequate time should be provided for the patient to ask questions and for the physician to put the patient at ease. When communication is done well at diagnosis, the stage is set for future positive trusting encounters. It is important to ensure that the patient understands what has been said. Information may be reinforced with drawings or by recording the session and giving the recording to the patient. Communication skills training programs that teach oncology professionals, for example, how to discuss prognosis and unanticipated adverse events and how to reach a shared treatment decision, may be very helpful. In fact, in an RCT, it was found that patients of oncologists who had communication skills training were less depressed at follow-up than patients of oncologists from the control group (P = .027).[175] Communication skills training was reviewed by Kissane et al.[176]

It is important for the oncology team to acknowledge and validate that this is a difficult experience for the patient and that distress is normal and expected. Being able to express distress to the staff helps provide relief to the patient and builds trust. The team needs to ensure that social supports are in place for the patient and that he or she knows about community resources such as support groups, teleconferences, and help lines. The NAM report contains a list of national organizations and their toll-free numbers.[46] Some selected organizations that provide free information services to patients with cancer are:

- American Cancer Society: www.cancer.org
- American Institute for Cancer Research: www.aicr.org
- American Psychosocial Oncology Society: http://apos-society.org/
- Cancer Support Community: http://www.cancersupportcommunity.org (Cancer Support Community provides the Cancer Support Helpline at 888.793.9355)
- CancerCare: www.cancercare.org
- National Cancer Institute: www.cancer.gov
- Cancer.net, sponsored by ASCO: www.cancer.net

Clinicians should be aware of the evidence-supported interventions available for the management of distress. In addition to these NCCN Guidelines for Distress Management, the following clinical practice guidelines will be useful to clinicians, including the oncology team:

- National Cancer Institute and several partners have developed a website that provides information about research-tested intervention programs (http://rtips.cancer.gov/rtips/index.do).

- Screening, Assessment, and Care of Anxiety and Depressive Symptoms in Adults With Cancer: An American Society of Clinical Oncology Guideline Adaptation (http://www.asco.org/)

Follow-up at regular intervals or at transition points in illness is an essential part of the NCCN Guidelines for Distress Management and the NAM model for care of the whole patient. This reassessment is particularly important in elderly patients with cancer.[177]

Psychological/Psychiatric Treatment by Mental Health Professionals

Psychosocial Interventions

Psychosocial interventions have been effective in reducing distress and improving overall quality of life among patients with cancer.[46,47] The 2007 NAM report noted that a strong evidence base supports the value of psychosocial interventions in cancer care.[46] The review examined the range of interventions (psychological, social, and pharmacologic) and their impact on any aspect of quality of life, symptoms, or survival. The extensive review found randomized clinical trials, systematic reviews, and meta-analyses supporting the conclusion that psychosocial aspects must be integrated into routine cancer care in order to give quality cancer care. More recent meta-analyses have come to similar conclusions, although more research is clearly needed.[178-181] Systematic reviews examining psychosocial interventions for patients with prostate cancer showed that these interventions may yield at least short-term effects on quality of life.[182,183] A meta-analysis including 53 studies of psychosocial interventions for patients with cancer (N = 12,323) showed that patients were more willing to participate in interventions delivered over the telephone versus in-person (P = .031) and when intervention is offered shortly after diagnosis versus later (P = .018).[184] CBT, supportive psychotherapy, and family and couples therapy are three key types of psychotherapies discussed in the NAM report.[46]

Cognitive Behavioral Therapy

CBT involves practicing relaxation techniques, enhancing problem-solving skills, and identifying and correcting inaccurate thoughts associated with feelings. In randomized clinical trials, CBT and cognitive-behavioral stress management have been shown to effectively reduce psychological symptoms (anxiety and depression) as well as physical symptoms (pain and fatigue) in patients with cancer.[185-191] However, a mindfulness-based cognitive therapy intervention for men with prostate cancer (N = 189) did not significantly impact distress, compared to minimally enhanced usual care.[192] A Cochrane systematic review including 28 RCTs (N = 3940) showed that CBT interventions favorably impact anxiety, depression, and mood disturbance in patients with non-metastatic breast cancer.[193] The quality of the evidence was low for anxiety and depression and moderate for mood disturbance, however, indicating the need for studies to use higher quality intervention methods and validated instruments for measuring outcomes. Another meta-analysis including 14 articles on 10 RCTs on mindfulness-based stress reduction and cognitive therapy for 1,709 patients with breast cancer showed that these interventions have short-term effects on anxiety and depression, but effect sizes were small.[194] A small RCT including 60 patients with cancer showed that a web-based CBT intervention may improve health-related quality of life, cancer-related distress, and anxious preoccupation following diagnosis.[195]

Ferguson and colleagues have developed a brief CBT intervention (Memory and Attention Adaptation Training [MAAT]) aimed at helping breast cancer survivors manage cognitive dysfunction associated with adjuvant chemotherapy.[196] In a randomized study, the study investigators found that patients in the intervention arm had improved verbal memory performance and spiritual well-being.[155] A randomized trial in which MAAT delivered through video conference was compared to supportive therapy in 47 survivors of breast cancer showed that MAAT improved self-reported

perceived cognitive impairments (*P* = .02) and neuropsychological processing speed (*P* = .03), compared to supportive therapy.[197]

Supportive Psychotherapy

Supportive psychotherapy, aimed at flexibly meeting patients' changing needs, is widely used. Different types of group psychotherapy have been evaluated in clinical trials among patients with cancer. Supportive-expressive group therapy has been shown to improve quality of life and psychological symptoms, especially improvements in mood and pain control in patients with metastatic breast cancer.[198,199] Hematopoietic stem cell transplant survivors (*n* = 264) who were experiencing survivorship problems and were randomized to an expressive helping intervention reported less distress, compared to survivors randomized to receive peer helping and neutral writing interventions (*P* < .05).[200] Cognitive-existential group therapy has been found to be useful in women with early-stage breast cancer receiving adjuvant chemotherapy.[201] Meaning-centered group psychotherapy, designed to help patients with advanced cancer sustain or enhance a sense of meaning, peace, and purpose in their lives (even as they approach the end of life), has also been shown to reduce psychological distress among patients with advanced cancer.[202-205] Dignity therapy has been assessed in an RCT of patients with a terminal diagnosis (not limited to cancer).[206] Although there was no significant improvement in levels of distress in patients receiving dignity therapy as measured by several scales, significant improvements in depression and self-reported aspects of quality of life were seen. An RCT for patients with renal cell carcinoma (*N* = 277) showed that expressive writing reduces self-reported cancer-related symptoms (eg, pain, nausea, fatigue) and improves physical functioning.[207] Secondary analyses from this study showed that the patients who benefited the most from the expressive writing intervention had both greater depressive symptoms and greater social support, as measured at baseline.[208] An individually delivered intervention targeting patients with advanced cancer, including components of manualized, supportive, expressive, cognitive, existential, and meaning-centered group psychotherapy approaches (N = 39), showed reduced depressive symptoms and death-related anxiety, and improved spiritual well-being in a feasibility study.[209] A larger RCT is currently being conducted.

Interventions incorporating internet support groups have become popular,[210] with a recent Cochrane review including 6 studies with 492 women with breast cancer showing a small to moderate effect on depression, based on low-quality evidence.[211] None of the 6 studies included in the review assessed emotional distress specifically, and results from 2 studies showed no significant impact on anxiety when comparing the intervention and control groups. Results of an RCT that included an internet support group with a prosocial component showed that this intervention did not reduce depression and anxiety in women with nonmetastatic breast cancer (*N* = 184).[212]

Psychoeducation

Psychoeducational interventions are those that offer education to those with specific psychological disorders or physical conditions. Psychoeducational interventions for patients with cancer may be general, such as providing information regarding stress management and healthy living (eg, nutrition, exercise),[213,214] while other interventions may be more specific to the cancer type. For example, an intervention for patients with melanoma was developed by Fawzy and Fawzy that provided information regarding sun protection, as well as stress management and coping strategies.[215] An RCT in which the effects of this intervention were tested with 262 patients with melanoma showed improvements in fatigue, vigor, mood disturbance, and coping strategies, though improvements did not persist past 6 months.[216] In an RCT examining the effects of a group-based psychoeducational intervention for 312 women with early-stage breast cancer, improved adjustment was demonstrated up to 6 months

after the intervention.[217] A year-long nurse-led intervention for patients with head and neck cancer (*N* = 205) included education regarding problems related to head and neck cancer and, if indicated, CBT and referral for further psychological treatment. This intervention positively impacted emotional and physical functioning, social contact, and depressive symptoms.[218] At 12-month follow-up (ie, one year after the end of the year-long intervention), effects persisted for emotional functioning only.

A meta-analysis examining 19 psychoeducational interventions with 3857 cancer patients showed small post-treatment effects overall for emotional distress, anxiety, depression, and quality of life.[178] The only significant effects at long-term follow-up were for quality of life. Psychoeducation interventions that offer education regarding symptom management may also be effective when delivered via the internet.[219-221]

Exercise

Exercise during and after cancer treatment can improve cardiovascular fitness and strength and can have positive effects on balance, body composition, and quality of life.[222-224] Small RCTs have shown that exercise may also impact mental health outcomes in patients with cancer and cancer survivors.[225-227] A Cochrane systematic review including 9 RCTs (*N* = 818) showed that aerobic exercise for patients with hematologic malignancies may reduce depression (standardized mean difference [SMD], 0.25; 95% CI, 0.00–0.50, *P* = .05) but not anxiety (*P* = .45).[228] However, the quality of the evidence in this area is low, as larger RCTs and longer follow-up periods are needed.

Family and Couples Therapy

A cancer diagnosis causes distress in partners and family members as well as the patient. Psychosocial interventions aimed at patients and their families together might lessen distress more effectively than individual interventions. In a longitudinal study of couples coping with early-stage breast cancer, mutual constructive communication was associated with less distress and more relationship satisfaction for both the patients and partners compared to demand/withdraw communication or mutual avoidance, suggesting that training in constructive communication would be an effective intervention.[229]

Family and couples therapy has not been widely studied in controlled trials. In an RCT in which 62 couples (patients with localized prostate cancer and their partners) were randomly assigned to receive cognitive existential couples therapy or usual care, adaptive and problem-focused coping was improved in couples receiving the therapy sessions, which in turn improved relationship cohesion, as well as relationship function in younger patients.[230] A small randomized trial was reported in which patients and their caregivers received 8 emotionally focused therapy sessions or standard care.[231] Significant improvements in marital functioning and patient experience of empathetic care by the caregiver were seen. These effects were maintained 3 months after the intervention. In a pilot study, a telephone-based dyadic intervention for patients with advanced lung cancer and their families (*N* = 39) improved depression, anxiety, and caregiver burden.[232] In addition, an RCT showed that family-focused grief therapy can reduce the morbid effects of grief in families with terminally ill patients with cancer.[233]

Some systematic reviews have been carried out to assess the efficacy of therapy involving patients' close others. A meta-analysis including 12 RCTs showed that couple-based interventions for patients with cancer and their spouses improved depression, anxiety, and marital satisfaction, compared to control groups.[234] A systematic review of 23 studies that assessed the efficacy of psychosocial interventions for couples affected by cancer found evidence that couples therapy might be at least as effective as individual therapy.[235] Another systematic review examining the effects of 10 interventions for couples coping with breast cancer showed that,

though results are mixed, these interventions tend to yield at least some benefit.[236]

Pharmacologic Interventions

Research suggests that antidepressants and antianxiety drugs are beneficial in the treatment of depression and anxiety in adult patients with cancer.[237-243] In RCTs, alprazolam[244,245] (a benzodiazepine) and fluoxetine[246,247] (a selective serotonin reuptake inhibitor [SSRI]) are effective in improving depressive symptoms in patients with cancer. SSRIs are widely used for depression and anxiety symptoms. A systemic review including 38 studies showed that antidepressants are prescribed to 15.6% (95% CI, 13.3–18.3) of cancer patients, with prescriptions being common in women (22.6%; 95% CI, 16.0–31.0) and in patients with breast cancer (22.6%; 95% CI, 16.0–30.9).[248]

The psychostimulants methylphenidate and the wakefulness-promoting non-amphetamine psychostimulant modafinil have been evaluated for their effect on cancer-related fatigue (CRF), with mixed results in patients undergoing cancer therapy.[164,249-251] A meta-analysis showed that methylphenidate reduces CRF, compared to a placebo (SMD, -0.28; 95% CI, -0.44 to -0.12), but modafinil did not significantly reduce CRF, compared to placebo treatment.[252] Analyzing 5 RCTs, Minton et al[253] attributed a significant benefit to methylphenidate in alleviating fatigue compared to placebo (Z-score [Z] = 2.83; *P* = .005). Patients have reported minor side effects with methylphenidate, including headache and nausea. Due to the limited number of studies and the marginal improvement in CRF in response to modafinil, it is not a recommended treatment. See the NCCN Guidelines for Cancer-Related Fatigue (available at www.NCCN.org).

Withdrawal from pharmacologic agents (eg, benzodiazepines, opioids, antidepressants, antianxiety drugs) should be managed with care and will vary based on the specific agent.

Complementary and/or Integrative Therapies

Regarding complementary and/or integrative therapies for patients with cancer, a systematic review showed that meditation, yoga, relaxation with imagery, massage, and music therapy may be helpful for patients with depressive disorders who have breast cancer.[254,255] Music therapy, meditation, and yoga may be used to reduce anxiety in patients with breast cancer.[254,255] A systematic review including 52 randomized and quasi-randomized trials with 3731 patients showed that music therapy benefits patients with anxiety ($P < .001$).[256] Findings from this review also indicated that music therapy may impact patients with depression, but the quality of the evidence was low.

A meta-analysis including 16 RCTs with 930 patients with breast cancer showed that yoga may reduce depression (SMD, -0.17; 95% CI, -0.32 to -0.01; $P < .001$) and anxiety (SMD, -0.98; 95% CI, -1.38 to -0.57; $P < .001$) in these patients.[257] However, the methodologic quality of the studies included in this review was generally low. A recent Cochrane review showed that, when compared to psychosocial or educational interventions, yoga may have at least short-term effects on depression (pooled SMD, -2.29; 95% CI, -3.97 to -0.61) and anxiety (pooled SMD, -2.21; 95% CI, -3.90 to -0.52).[258] A small RCT ($N = 54$) found that patients randomized to receive a 10-week yoga intervention reported less anxiety 22 weeks after randomization ($P = .043$) and less depression 10 weeks after randomization ($P = .038$) than patients randomized to a wait-list control group.[259] However, attrition was high and intervention adherence poor in this study. The panel currently does not recommend yoga for patients with distress, and larger randomized studies are needed to investigate the potential impact of yoga on distress.

Based on the evidence described above, the panel recommends relaxation, mediation, and creative therapies such as art and music for patients experiencing distress.

Psychological/Psychiatric Treatment Guidelines

Patients scoring 4 or higher on the DT during any visit to the oncologist are referred to the appropriate supportive service (mental health, social work and counseling, or chaplaincy professionals) based on the identified problem.

Mental health professionals are expected to conduct a psychological or psychiatric evaluation that includes an assessment of the nature of the distress, problematic behaviors, psychological/psychiatric history and symptoms, use of medications, substance use disorder, pain, fatigue, sleep disturbances, other physical symptoms, cognitive impairment, body image, sexual health, and capacity for decision-making and physical safety. Demoralization, which is characterized by helplessness and loss of meaning and purpose, should be evaluated and distinguished from the presence of a depressive disorder.[260,261] A psychiatrist, psychologist, nurse, advanced practice clinician, or social worker may perform the evaluation. All of these professionals are skilled in mental health assessment and treatment.

Patients with mental illness experience cancer disparities, such as increased cancer mortality rates, more advanced cancer at time of diagnosis, and more comorbidities.[262,263] The panel has developed evaluation and treatment guidelines for the most commonly encountered psychiatric disorders, consistent with the classification in the most recent edition of the DSM.[168] These disorders include neurocognitive disorders (dementia and delirium), depressive disorders, bipolar and related disorders, trauma- and stressor-related disorders (including adjustment disorders), anxiety disorders, substance-related and addictive disorders, schizophrenia spectrum and other psychotic disorders, obsessive compulsive and related disorders, and personality disorders. Psychotropic drugs are recommended throughout the guidelines to treat psychiatric disorders. It is important to note that these drugs can sometimes interact with anticancer therapies and cause adverse effects. Howard et al[264] reviewed some of these interactions and discusses other challenges in treating cancer in patients with severe mental illness.

Patients considered to be a danger to themselves or others should receive a psychiatric consultation. Increased monitoring is also warranted, as well as the removal of guns and other dangerous objects. Hospitalization and suicide and homicide risk evaluation may sometimes be necessary. Mental health treatment/follow-up of these patients, family education regarding safety, and assuring the safety of others is warranted. Referral to social work services or chaplaincy care may also be considered.

Additional information regarding treatment of distress and psychiatric disorders in cancer can be found in the comprehensive handbook, *Psycho-Oncology: A Quick Reference on the Psychosocial Dimensions of Cancer Symptom Management*,[265] and the comprehensive textbook, *Psycho-Oncology*.[266] Additional resources targeting specific age groups include the comprehensive handbooks, *Geriatric Psycho-Oncology: A Quick Reference on the Psychosocial Dimensions of Cancer Symptom Management*,[267] and *Pediatric Psycho-Oncology: A Quick Reference on the Psychosocial Dimensions of Cancer Symptom Management*,[268] which target management of psychological, cognitive, and social difficulties in older adults and children/adolescents, respectively. The NCCN Guidelines for Supportive Care may also be referred to as needed (available at www.NCCN.org).

Neurocognitive Disorders

Neurocognitive disorders that may affect patients being treated with cancer include dementia and delirium. Dementia and delirium are cognitive impairments that can severely alter the patient's decision-making capacity. Dementia is a permanent cognitive impairment. It is not a common complication of cancer treatment, but is often present in elderly patients as a comorbid condition.[269,270] A systematic review including 9 studies showed that patients with dementia are diagnosed at a later stage of cancer, receive less treatment, experience more complications, and have poorer survival, compared to patients without dementia.[271] Dementia can be treated with cognitive rehabilitation, with or without medications, though treatment is largely behavior management.

Delirium is a short-term cognitive impairment and has been reported to occur in as many as 43% of patients with advanced cancer.[272] Delirium is usually reversible and occurs in cancer treatment that is associated with toxicity; it is often related to medication, particularly opioids.[273] Benzodiazepines should be used with caution, as their use may contribute to delirium.[274-276] A prospective case-control cohort study (N = 245) showed a significant association between benzodiazepine use and development of postoperative delirium (odds ratio [OR], 3.0; 95% CI, 1.3–6.8), with stronger associations for long-acting agents (OR, 5.4; 95% CI, 1.0–29.2) and high-dose exposure (OR, 3.3; 95% CI, 1.0–11.0).[274]

A prospective observational study of 243 patients with advanced cancer who presented to an emergency department at an NCCN Member Institution showed that delirium was present in 9% of all patients, but physicians correctly diagnosed delirium in only 59% of patients experiencing delirium.[277] Additional analyses from this study showed that patients with delirium had worse overall survival and were more likely to be hospitalized, compared to patients without delirium.[278] A retrospective chart review of 771 palliative care consultations showed that symptoms of delirium were misinterpreted by the primary oncology team 61% of the time.[279] Delirium is managed by attention to safety, modification of opioids or other medications, antipsychotics, behavior management, and family support and education.[280]

The United Kingdom's National Institute for Health and Care Excellence (NICE) issued detailed guidelines for the diagnosis, prevention, and management of delirium.[281] In addition, a comprehensive review in *The Journal of Clinical Oncology* Special Series on Psychosocial Care in Cancer by Breitbart and Alici[282] describes the evidence base for recommended pharmacologic and non-pharmacologic treatments for delirium in patients with cancer.

Depressive and Bipolar-Related Disorders

Depressive and bipolar-related disorders are common in patients with cancer and can be debilitating.[283-287] A cross-sectional analysis of 2141 patients with cancer showed a 4-week prevalence rate of 6.5% (95% CI, 5.5–7.5) for a depressive or bipolar-related disorder.[288] Depressive symptoms during cancer diagnosis and treatment may persist for as long as 2 years following diagnosis.[289] Depressive and bipolar-related disorders are associated with poorer cancer survival.[290-292]

Patients with uncontrolled depressive and bipolar-related disorders can develop suicidal tendencies. A study of over 5,000 patients at one center found that 6% of patients with cancer experienced suicidal ideation.[293] The incidence of suicide among patients with cancer in the United States is twice that of the general population.[294-296] Older patients, patients who undergo high-morbidity surgeries, and men with head and neck cancer or myeloma seem to have a higher risk of suicide.[297,298] Among patients with breast cancer, suicide mortality is associated with younger age, being male, non-White non-Black race, being unmarried, having undergone surgery, having progesterone-receptor-positive disease, and shorter time

elapsed since diagnosis.[299] Violence may also be associated with depressive disorders, particularly when there is comorbid substance use.[300] Therefore, both suicide and homicide risk should be evaluated in patients believed to be a danger to themselves and others.

Depressive and bipolar-related disorders are usually managed with psychotherapy or psychotropic medication (category 1). The evidence for these treatments has been described.[301-312] In particular, a review by Li et al[313] in *The Journal of Clinical Oncology* Special Series on Psychosocial Care in Cancer comprehensively describes the evidence for recommended pharmacologic and psychosocial interventions for treating depression in patients with cancer. Referral to social work counseling and chaplaincy services may also be considered. If these patients have no or only a partial response to treatment, then the chosen psychotherapeutic intervention should be re-evaluated. The following options should also be considered: 1) augmenting or changing medication; 2) electroconvulsive therapy (ECT); 3) higher level care with an intensive outpatient program; and 4) obtaining a second opinion. In ECT, electrical currents are passed through the brain in a controlled fashion, inducing a brief seizure. ECT appears to be an effective treatment of psychotic depression, mania, catatonia, and other psychiatric disorders.[314-318] Although the use of ECT in cancer has not been well-studied, several case studies suggest that it can be safe and effective.[319-323]

ASCO has released a clinical oncology guideline adaptation of a pan-Canadian practice guideline for the screening, assessment, and treatment of anxiety and depression in patients with cancer.[324] The panel recommends that PHQ-2 or PHQ-9 be used to screen for depressive disorders, since these brief tools are superior to the DT for this purpose (see *Screening Tools for Distress and Meeting Psychosocial Needs: Distress Thermometer*, above).

Schizophrenia Spectrum and Other Psychotic Disorders

Psychotic disorders include hallucinations, delusions, and/or thought disorders; patients with recurrent psychotic episodes are considered to have a schizophrenia spectrum disorder. Schizophrenia spectrum and other psychotic disorders can exist as comorbidities in patients with cancer and can also be caused or exacerbated by cancer and its associated stress and treatment. In particular, corticosteroids or corticosteroid withdrawal can induce psychosis, which may be relieved by modifying dose or changing corticosteroid choice.[325,326] When a patient in a long-term psychiatric facility develops cancer, there is a need for coordination of care between the psychiatric facility and the inpatient cancer facility. Special attention should be paid to the transition of a psychiatric patient who needs inpatient oncology care. The issues around continuation of psychotropic medications, when they must be stopped for surgery or chemotherapy and when they should be restarted, are important issues in total care. Evaluation for any active signs of psychosis should be considered when someone with a history of schizophrenia or a psychotic disorder is diagnosed with cancer.

When a psychotic episode occurs in a patient with cancer, differential diagnoses must be ruled out. Delirium is often confused with psychotic disorder and is much more common; dementia, depressive and bipolar-related disorders, and substance-related and addictive disorders should also be considered. When psychotic disorder or schizophrenia spectrum disorder is diagnosed, several interventions can be considered: 1) anti-psychotic medication; 2) medication for mood; 3) transfer to a psychiatric unit/hospital; or 4) ECT for psychotic depression/mania or catatonia. Anti-psychotics may need to be urgently administered if there is risk to self, others, or the environment.

Anxiety Disorders and Obsessive Compulsive and Related Disorders

Anxiety occurs at times in most patients with cancer.[283,327] A cross-sectional analysis of 2141 patients with cancer showed a 4-week prevalence rate of 11.5% (95% CI, 10.2–12.9) for any anxiety disorder.[288] The diagnosis of cancer and the effects of the disease and its treatment are obvious sources of unease; however, anxiety may also be related to physiologic aspects of the medical condition (eg, hormone-secreting tumors; effects of certain types of medications [bronchodilators]; withdrawal from alcohol or narcotics; pain or some other distressing physical symptom). Anxiety may not be severe or problematic, but needs to be addressed when it becomes disruptive. After ruling out medical causes, the clinician should assess symptoms to determine the particular nature of the anxiety disorder(s). Generalized anxiety disorder is usually pre-existing and may be exacerbated by illness. Panic disorder may recur during illness in a person with previous panic symptoms. Patients with cancer may also be at increased risk of agoraphobia.[328] Obsessive-compulsive disorder is a pre-existing disorder that results in difficulty in making decisions, ruminative thoughts about illness, and fearfulness to take medication. Some patients develop phobias of needles, hospitals, and blood or conditioned nausea/vomiting related to chemotherapy. Chemotherapy-induced nausea and vomiting should be managed according to the NCCN Guidelines for Antiemesis (available at www.NCCN.org). Patients with anxiety associated with religious or spiritual concerns should be referred to chaplaincy care.

The NCCN Distress Management Panel recommends psychotherapy as a category 1 recommendation for the treatment of anxiety disorders, including obsessive compulsive disorder, after eliminating medical causes. Treatment with an antidepressant or an anxiolytic is also recommended. If there is a response to initial treatment, follow-up should occur with the primary oncology team, primary care physician, and family/caregivers. If no response or a partial response is noted, the patient should be re-evaluated and treated with different medications (an antipsychotic should be considered) with continued psychotherapy, support, and education. If there is still not a complete response, then the patient should be evaluated for depression and other psychiatric comorbidity.

The evidence for the effectiveness of these treatments has been reviewed.[46,47] In a review in *The Journal of Clinical Oncology* Special Series on Psychosocial Care in Cancer, Traeger et al[329] give a comprehensive description of the evidence for recommended pharmacologic and non-pharmacologic treatments for anxiety in patients with cancer.

Trauma- and Stressor-Related Disorders

Trauma and stressor-related disorders that may affect patients with cancer include post-traumatic stress disorder (PTSD), acute stress disorder, and adjustment disorder. PTSD may develop after arduous cancer treatments, during a cancer treatment that triggers a traumatic memory of a past frightening event, or just from the stress of a cancer diagnosis. As many as 12% of patients with stage I–III breast cancer have been found to have persistent PTSD. Survivors of cancer may continue to experience PTSD symptoms.[330,331] A meta-analysis including 25 studies with 4,189 cancer survivors (mostly survivors of breast cancer) showed that self-reported PTSD symptoms occur in 7.3% of survivors, while rates based on structured clinical interviews are 12.6% for lifetime PTSD and 6.4% for current PTSD.[332] A PTSD diagnosis prior to cancer diagnosis or previous trauma is a risk factor for cancer-related PTSD.[333] Acute stress disorder is diagnosed in the first month following a traumatic event, and the criteria contain a greater emphasis on dissociative symptoms. Twenty-three percent to 28% of patients diagnosed with cancer meet criteria for acute stress disorder.[334-336] Adjustment disorder refers to a cluster of symptoms such as stress, depressive symptoms, and physical symptoms following a

stressful life event such as cancer diagnosis and treatment. It may be diagnosed when a patient who experienced a stressful life event does not meet criteria for PTSD or acute stress disorder. Adjustment disorder occurs in 15.4% of patients in palliative care settings and in 11% to 19% of patients in oncologic and hematologic settings.[11,288]

Treatment of trauma- and stressor-related disorders in patients with cancer includes psychotherapy (category 1) with or without an antidepressant and/or an anxiolytic. If this treatment yields no response or a partial response, then psychotherapy, support, and education should be reevaluated. Choice of medication should also be reconsidered, with a consideration of antipsychotics. The National Cancer Institute's Physician Data Query (PDQ®) provides information on cancer-related posttraumatic stress education resources that may be useful for patients (https://www.cancer.gov/about-cancer/coping/survivorship/new-normal/ptsd-pdq) and health care professionals (https://www.cancer.gov/about-cancer/coping/survivorship/new-normal/ptsd-hp-pdq).

For patients diagnosed with adjustment disorder specifically, patients with moderate/severe disorder should receive medication and/or psychotherapy, while patients with mild disorder should receive psychotherapy only. For patients who receive medication, type of medication and the dosage should be adjusted as needed. Patients diagnosed with adjustment disorder that does not respond to treatment should have their treatment plan, support, and education re-evaluated and should also be evaluated for personality disorders.

Substance-Related and Addictive Disorders

Substance dependence, abuse, and addiction are rare among patients with cancer who do not have a history of active dependence, abuse, or addiction to opioids, alcohol, or tobacco. Substance use disorder developing during the course of the treatment may be due to insufficient symptom control and can be treated by improving symptom control. Alcohol and recreational drug use should be evaluated in patients with signs and symptoms of depressive disorders, bipolar and related disorders, and anxiety disorders, as substance use may exacerbate symptoms of these disorders. The NCCN Guidelines for Adult Cancer Pain (available at www.NCCN.org) provide information on prescription, titration, maintenance, and safety of opioids. For patients who use tobacco, see the NCCN Guidelines for Smoking Cessation (available at www.NCCN.org).

In patients with a history of substance use disorder, its impact on cancer treatment should be assessed. Patients with a history of substance use disorder should also be monitored for signs and symptoms of relapse. Referral should be considered for risk reduction, substance use disorder management, or specialized treatment programs as needed. For patients with current substance dependence issues, symptoms should be treated and they should enter an appropriate substance use disorder treatment program. Risk reduction strategies should be discussed with all patients who have either a current substance use disorder or a history of a substance use disorder.

Following the appropriate treatment/management program, patients should be provided with psychoeducation with or without psychotherapy and with or without medication. CBT may be effective for substance use disorder, though a meta-analysis of 53 studies showed only a small effect (Hedges' g = 0.15, $P < .005$).[337] Studies evaluating the efficacy of CBT for substance use disorder in patients with cancer are lacking. Referral can also be made to specialized maintenance programs, and strategies to prevent future abuse can be discussed.

Personality Disorders

Patients with cancer may have a pre-existing personality disorder, which can be exacerbated by the stress of cancer and its treatment.[338] When a personality disorder is suspected, the patient should be evaluated by a mental health professional, and safety, home situation, and decision-making capacity should be assessed. If possible, any medication or other factors that could be aggravating the condition should be modified. A coordinated behavioral, psychological, and medical treatment plan, with or without medication, should be developed with the health care team.

Social Work and Counseling Services

Social work and counseling services are recommended when a patient has a psychosocial or practical problem. Practical problems are illness-related concerns; basic needs (eg, housing, food, financial/insurance concerns, help with activities of daily living, transportation); employment, school, or career concerns; cultural or language issues; and family/caregiver availability. The guidelines outline interventions that vary according to the severity of the problem.

Common psychosocial problems are adjustment to illness; family conflicts and social isolation; difficulties in treatment decision-making; quality-of-life issues; difficulties with transitions in care; absent or unclear advance directive or other concerns about advance directives; domestic abuse and neglect; poor coping or communication skills; concerns about functional changes (eg, body image, sexual health); depressive symptoms and/or suicidal ideation; fears, nervousness, and worry; and issues pertaining to end of life and bereavement (including cultural and caregiver concerns).

Social workers intervene in mild psychosocial problems by using patient and family education, support groups, and/or sexual health or grief counseling and by suggesting available local resources. Social workers can also help foster healthy coping strategies, such as problem solving, cognitive restructuring, and emotion regulation.[339] For moderate to severe psychosocial problems, counseling and psychotherapy are used (including sexual health and grief counseling); community resources are mobilized; problem solving is taught; and advocacy, education, and protective services are made available.

Spiritual and Chaplaincy Care

Religiousness and spirituality are positively associated with mental health in patients with cancer,[340] and attendance at religious services is associated with lower cancer-related mortality.[341] Many patients use their religious and spiritual resources to cope with illness,[342] and many cite prayer as a major help. In addition, the diagnosis of cancer can cause an existential crisis, making spiritual support of critical importance. Balboni et al[343] surveyed 230 patients with advanced cancer treated at multiple institutions who had failed to respond to first-line chemotherapy. The majority of patients (88%) considered religion as somewhat or very important. Nearly half of the patients (47%) reported receiving very minimal or no support at all from their religious community, and 72% reported receiving little or no support from their medical system.[343] Importantly, patients receiving spiritual support reported a higher quality of life. Religiousness and spiritual support have also been associated with improved satisfaction with medical care. Astrow et al[344] found that 73% of patients with cancer had spiritual needs, and that patients whose spiritual needs were not met reported lower quality of care and lower satisfaction with their care. A multi-institution study of 75 patients with cancer and 339 oncologists and nurses (the Religion and Spirituality in Cancer Care Study) found that spiritual care had a positive effect on patient-provider relationships and the emotional well-being of patients.[345] However, a survey conducted in 2006 through 2009 found that most patients with advanced cancer never receive spiritual care from their oncology team.[346] Spiritual needs may include searching for the meaning and purpose of life; searching for the meaning in experiencing a disease like cancer; being

connected to others, a deity, and nature; maintaining access to religious/spiritual practices; spiritual well-being; talking about death and dying; making the most of one's own life; and being independent and treated like a "normal person."[347]

A meta-analysis including 12 studies with 1878 patients showed that spiritual interventions improve quality of life (*d* = 0.50; 95% CI, 0.20–0.79), but the effect was small at 3- to 6-month follow-up (*d* = 0.14; 95% CI, -0.08–0.35).[348] Another meta-analysis including 24 studies showed that existential interventions positively impacted existential well-being, quality of life, hope, and self-efficacy, though results were moderated by intervention characteristics (eg, therapist's professional background, intervention setting).[349]

The panel has included chaplaincy care as part of psychosocial services. All patients should be referred to a chaplaincy professional when their problems are spiritual or religious in nature or when they request it. Guided by the Religious and Spiritual Struggles Scale[350] and the Existential Distress Scale,[351] the panel identified three main issues that should be included as part of evaluation by a chaplain: interpersonal conflict regarding spiritual/religious beliefs and practices; concerns with lack of meaning and purpose; and struggles with morality and values (including doubts about beliefs; perceptions of being attacked by evil; concerns about one's relationship with the sacred; concerns about death, dying, and the afterlife; grief and loss; feeling worthless or like a burden; loneliness; conflict between religious beliefs and treatment options; and ritual needs).

The panel has identified interventions that may be carried out based on this assessment. These interventions, which are based on recommendations by Spiritual Health Victoria (www.spiritualhealthvictoria.org.au/standards-and-frameworks), include spiritual/existential counseling, education, and rituals; meditation and/or prayer; referral to appropriate spiritual/existential community resources; and referral to other health care professionals (eg, palliative care, mental health professional) as needed.

A consensus conference on improving the quality of spiritual care as a dimension of palliative care was held in February 2009. The report from this conference provides recommendations for health care professionals on the integration of spiritual care into the patient's overall treatment plan.[352] The inclusion of a certified chaplain on the interdisciplinary team is critical for the implementation of spiritual care into routine clinical practice.

The following guidelines on religion and spirituality in cancer care may be useful for clinicians and patients:

- National Consensus Project Clinical Practice Guidelines for Quality Palliative Care, Third Edition, 2013. These guidelines provide a framework to acknowledge the patient's religious and spiritual needs in a clinical setting. Spiritual, religious, and existential aspects of care are included as 1 of the 8 clinical practice domains.
- The National Cancer Institute's comprehensive cancer information database (PDQ®) has information on "Spirituality in Cancer Care" for patients (http://www.cancer.gov/cancertopics/pdq/supportivecare/spirituality/Patient) and for health care professionals (http://www.cancer.gov/cancertopics/pdq/supportivecare/spirituality/HealthProfessional).

Oncologist Burnout

The stress and demands of treating patients with cancer and making life and death decisions daily often cause psychologic distress for oncologists. This distress can in turn cause depression, anxiety, and fatigue. It can also cause moral distress, compassion fatigue, and/or burnout. Burnout, characterized by a lack of enthusiasm for work, feelings of cynicism, and a

low sense of personal accomplishment with work, occurs in as many as 28% to 45% of oncologists.[353-356] Burnout can affect patient care, physician-patient relationships, and personal relationships and can lead to substance use disorder and even suicide. Strategies for avoiding and reducing burnout include training in self-care, personal wellness, mindful meditation, and behavioral change by medical schools, residency programs, hospitals, and private practices.[353,357] Organizational strategies can also create a culture that is less stressful and less conducive to oncologist burnout.

The *Journal of Clinical Oncology* Special Series on Psychosocial Care in Cancer

In April 2012, the *Journal of Clinical Oncology* published a Special Series on psychosocial care (https://ascopubs.org/doi/full/10.1200/JCO.2011.39.5046), demonstrating the importance of this topic. The Special Series includes a review by Jacobsen and Wagner that describes how the new standard of psychosocial care, the development of clinical practice guidelines for psychosocial care such as these NCCN Guidelines, and the establishment of indicators to measure the quality of psychosocial care can help increase the number of patients with cancer receiving psychosocial care.[358] Central to the successful integration of psychosocial care into routine cancer care is a distress screening program. In the Special Series, Carlson et al[75] present their recommendations for implementing such a program, and Fann et al[76] discuss the organizational challenges of this new integrated care model, with a focus on the collaborative care service model.

Research on psychosocial care in cancer treatment has expanded greatly in recent years. This fact attests to the growing awareness of the importance of the topic, both by health care professionals and by the public.[359] The Special Series includes reviews of evidence-based interventions for 3 common psychosocial problems in patients with cancer: depression, anxiety, and delirium.[282,313,329]

Worries and concerns about cancer do not necessarily end with the end of acute care. The Special Series thus also includes articles addressing the psychosocial needs of AYAs and adult cancer survivors.[360,361] An article on the psychosocial needs of caregivers is also included.[362]

In addition, an article was included on oncologist burnout.[353] The Special Series concludes with a review and meta-analysis of studies that provide evidence for the development of an appropriate curriculum for communication skills training of oncologists.[176] Patient benefit from such training (eg, better adherence to treatment) has yet to be demonstrated.

Summary

Psychosocial care is an integral component of the clinical management of patients with cancer. The CoC's accreditation standards include distress screening for all patients and referral for psychosocial care as needed. Screening for and treating distress in cancer benefits patients, their families/caregivers, and staff and helps improve the efficiency of clinic operations. For patients with cancer, integration of mental health and medical services is critically important. Spirituality and religion also play an important role for many patients with cancer in coping with the diagnosis and the illness.

The NCCN Guidelines for Distress Management recommend that each new patient be rapidly assessed in the office or clinic waiting room for evidence of distress using the DT and Problem List as an initial global screen. A score of 4 or greater on the DT should trigger further evaluation by the oncologist or nurse and referral to an appropriate resource, if needed. The choice of which supportive care service is needed is dependent on the problem areas specified on the Problem List. Patients with practical and psychosocial problems should be referred to social

workers; those with emotional or psychological problems should be referred to mental health professionals including social workers; and spiritual concerns should be referred to certified chaplains. Physical concerns may be best managed by the medical team.

Education of patients and families is equally important to encourage them to recognize that control of distress is an integral part of their total cancer care. The patient version of the NCCN Guidelines for Distress Management is a useful tool to accomplish this (available at www.NCCN.org).

References

1. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2018. CA Cancer J Clin 2018;68:7-30. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29313949.

2. U.S. National Library of Medicine-Key MEDLINE® Indicators. Available at: http://www.nlm.nih.gov/bsd/bsd_key.html. Accessed July 24, 2014.

3. Cleeland CS, Bennett GJ, Dantzer R, et al. Are the symptoms of cancer and cancer treatment due to a shared biologic mechanism? A cytokine-immunologic model of cancer symptoms. Cancer 2003;97:2919-2925. Available at: http://www.ncbi.nlm.nih.gov/pubmed/12767108.

4. Dantzer R, O'Connor JC, Freund GG, et al. From inflammation to sickness and depression: when the immune system subjugates the brain. Nat Rev Neurosci 2008;9:46-56. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18073775.

5. Miller K, Massie MJ. Depression and anxiety. Cancer J 2006;12:388-397. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17034675.

6. Reiche EM, Nunes SO, Morimoto HK. Stress, depression, the immune system, and cancer. Lancet Oncol 2004;5:617-625. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15465465.

7. Hawkins NA, Soman A, Buchanan Lunsford N, et al. Use of medications for treating anxiety and depression in cancer survivors in the United States. J Clin Oncol 2017;35:78-85. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28034075.

8. Funk R, Cisneros C, Williams RC, et al. What happens after distress screening? Patterns of supportive care service utilization among oncology patients identified through a systematic screening protocol. Support Care Cancer 2016;24:2861-2868. Available at: http://www.ncbi.nlm.nih.gov/pubmed/26838023.

9. Krebber AM, Jansen F, Cuijpers P, et al. Screening for psychological distress in follow-up care to identify head and neck cancer patients with untreated distress. Support Care Cancer 2016;24:2541-2548. Available at: http://www.ncbi.nlm.nih.gov/pubmed/26694718.

10. Mehnert A, Hartung TJ, Friedrich M, et al. One in two cancer patients is significantly distressed: Prevalence and indicators of distress. Psychooncology 2017. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28568377.

11. Mitchell AJ, Chan M, Bhatti H, et al. Prevalence of depression, anxiety, and adjustment disorder in oncological, haematological, and palliative-care settings: a meta-analysis of 94 interview-based studies. Lancet Oncol 2011;12:160-174. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21251875.

12. Traeger L, Cannon S, Keating NL, et al. Race by sex differences in depression symptoms and psychosocial service use among non-Hispanic black and white patients with lung cancer. J Clin Oncol 2014;32:107-113. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24323033.

13. Carlsen K, Jensen AB, Jacobsen E, et al. Psychosocial aspects of lung cancer. Lung Cancer 2005;47:293-300. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15713512.

14. Hegel MT, Moore CP, Collins ED, et al. Distress, psychiatric syndromes, and impairment of function in women with newly diagnosed breast cancer. Cancer 2006;107:2924-2931. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17103381.

15. Spiegel D, Giese-Davis J. Depression and cancer: mechanisms and disease progression. Biol Psychiatry 2003;54:269-282. Available at: http://www.ncbi.nlm.nih.gov/pubmed/12893103.

16. Holland JC, Alici Y. Management of distress in cancer patients. J Support Oncol 2010;8:4-12. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20235417.

17. Linden W, Vodermaier A, Mackenzie R, Greig D. Anxiety and depression after cancer diagnosis: prevalence rates by cancer type,

gender, and age. J Affect Disord 2012;141:343-351. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22727334.

18. Massie MJ. Prevalence of depression in patients with cancer. J Natl Cancer Inst Monogr 2004:57-71. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15263042.

19. Hall AE, Sanson-Fisher RW, Carey ML, et al. Prevalence and associates of psychological distress in haematological cancer survivors. Support Care Cancer 2016;24:4413-4422. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27245984.

20. Alfonsson S, Olsson E, Hursti T, et al. Socio-demographic and clinical variables associated with psychological distress 1 and 3 years after breast cancer diagnosis. Support Care Cancer 2016;24:4017-4023. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27129841.

21. Zabora J, BrintzenhofeSzoc K, Curbow B, et al. The prevalence of psychological distress by cancer site. Psychooncology 2001;10:19-28. Available at: http://www.ncbi.nlm.nih.gov/pubmed/11180574.

22. Ringwald J, Wochnowski C, Bosse K, et al. Psychological distress, anxiety, and depression of cancer-affected BRCA1/2 mutation carriers: a systematic review. J Genet Couns 2016;25:880-891. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27074860.

23. Hirschberg AM, Chan-Smutko G, Pirl WF. Psychiatric implications of cancer genetic testing. Cancer 2015;121:341-360. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25234846.

24. Partridge AH, Wang PS, Winer EP, Avorn J. Nonadherence to adjuvant tamoxifen therapy in women with primary breast cancer. J Clin Oncol 2003;21:602-606. Available at: http://www.ncbi.nlm.nih.gov/pubmed/12586795.

25. DiMatteo MR, Lepper HS, Croghan TW. Depression is a risk factor for noncompliance with medical treatment: meta-analysis of the effects of anxiety and depression on patient adherence. Arch Intern Med 2000;160:2101-2107. Available at: http://www.ncbi.nlm.nih.gov/pubmed/10904452.

26. Bultz BD, Holland JC. Emotional distress in patients with cancer: the sixth vital sign. Commun Oncol 2006;3:311-314. Available at: http://www.communityoncology.net/co/journal/articles/0305311.pdf.

27. Carlson LE, Bultz BD. Efficacy and medical cost offset of psychosocial interventions in cancer care: making the case for economic analyses. Psychooncology 2004;13:837-849; discussion 850-836. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15578622.

28. Nipp RD, El-Jawahri A, Moran SM, et al. The relationship between physical and psychological symptoms and health care utilization in hospitalized patients with advanced cancer. Cancer 2017;123:4720-4727. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29057450.

29. Brown KW, Levy AR, Rosberger Z, Edgar L. Psychological distress and cancer survival: a follow-up 10 years after diagnosis. Psychosom Med 2003;65:636-643. Available at: http://www.ncbi.nlm.nih.gov/pubmed/12883115.

30. Kissane D. Beyond the psychotherapy and survival debate: the challenge of social disparity, depression and treatment adherence in psychosocial cancer care. Psychooncology 2009;18:1-5. Available at: http://www.ncbi.nlm.nih.gov/pubmed/19097139.

31. Pirl WF, Greer JA, Traeger L, et al. Depression and survival in metastatic non-small-cell lung cancer: effects of early palliative care. J Clin Oncol 2012;30:1310-1315. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22430269.

32. Batty GD, Russ TC, Stamatakis E, Kivimaki M. Psychological distress in relation to site specific cancer mortality: pooling of unpublished data from 16 prospective cohort studies. Bmj 2017;356:j108. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28122812.

33. Carmack CL, Basen-Engquist K, Gritz ER. Survivors at higher risk for adverse late outcomes due to psychosocial and behavioral risk factors.

Cancer Epidemiol Biomarkers Prev 2011;20:2068-2077. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21980014.

34. Carlson LE, Bultz BD. Cancer distress screening. Needs, models, and methods. J Psychosom Res 2003;55:403-409. Available at: http://www.ncbi.nlm.nih.gov/pubmed/14581094.

35. Zabora JR. Screening procedures for psychosocial distress. In: Holland JC, Breitbart W, Jacobsen PB, al. e, eds. Psycho oncology. New York, NY: Oxford University Press; 1998:653-661.

36. Carlson LE, Groff SL, Maciejewski O, Bultz BD. Screening for distress in lung and breast cancer outpatients: a randomized controlled trial. J Clin Oncol 2010;28:4884-4891. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20940193.

37. Mustafa M, Carson-Stevens A, Gillespie D, Edwards AG. Psychological interventions for women with metastatic breast cancer. Cochrane Database Syst Rev 2013;6:Cd004253. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23737397.

38. Spiegel D. Mind matters in cancer survival. Psychooncology 2012;21:588-593. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22438289.

39. Xia Y, Tong G, Feng R, et al. Psychosocial and behavioral interventions and cancer patient survival again: hints of an adjusted meta-analysis. Integr Cancer Ther 2014;13:301-309. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24613928.

40. Kadan-Lottick NS, Vanderwerker LC, Block SD, et al. Psychiatric disorders and mental health service use in patients with advanced cancer: a report from the coping with cancer study. Cancer 2005;104:2872-2881. Available at: http://www.ncbi.nlm.nih.gov/pubmed/16284994.

41. Sharpe M, Strong V, Allen K, et al. Major depression in outpatients attending a regional cancer centre: screening and unmet treatment needs. Br J Cancer 2004;90:314-320. Available at: http://www.ncbi.nlm.nih.gov/pubmed/14735170.

42. Fallowfield L, Ratcliffe D, Jenkins V, Saul J. Psychiatric morbidity and its recognition by doctors in patients with cancer. Br J Cancer 2001;84:1011-1015. Available at: http://www.ncbi.nlm.nih.gov/pubmed/11308246.

43. Holland JC. American Cancer Society Award lecture. Psychological care of patients: psycho-oncology's contribution. J Clin Oncol 2003;21:253s-265s. Available at: http://www.ncbi.nlm.nih.gov/pubmed/14645405.

44. Fitchett G, Handzo G. Spiritual assessment, screening, and intervention. In: Holland JC, ed. Psycho Oncology. New York: Oxford University Press; 1998:790-808.

45. Holland JC, Greenberg DB, Hughes MK. Quick Reference for Oncology Clinicians: The Psychiatric and Psychological Dimensions of Cancer Symptom Management Oncology IPOS press; 2006.

46. Adler NE, Page NEK. Institute of Medicine (IOM). 2008. Cancer Care for the Whole Patient: Meeting Psychosocial Health Needs. 2008. Available at: http://www.iom.edu/Reports/2007/Cancer-Care-for-the-Whole-Patient-Meeting-Psychosocial-Health-Needs.aspx.

47. Jacobsen PB, Jim HS. Psychosocial interventions for anxiety and depression in adult cancer patients: achievements and challenges. CA Cancer J Clin 2008;58:214-230. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18558664.

48. Holland JC, Lazenby M, Loscalzo MJ. Was there a patient in your clinic today who was distressed? J Natl Compr Canc Netw 2015;13:1054-1056. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26358788.

49. Quality improvement guidelines for the treatment of acute pain and cancer pain. American Pain Society Quality of Care Committee. JAMA 1995;274:1874-1880. Available at: http://www.ncbi.nlm.nih.gov/pubmed/7500539.

50. Jacobsen PB, Ransom S. Implementation of NCCN distress management guidelines by member institutions. J Natl Compr Canc Netw

2007;5:99-103. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17239329.

51. Donovan KA, Jacobsen PB. Progress in the implementation of NCCN guidelines for distress management by member institutions. J Natl Compr Canc Netw 2013;11:223-226. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23411388.

52. Deshields T, Zebrack B, Kennedy V. The state of psychosocial services in cancer care in the United States. Psychooncology 2013;22:699-703. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22354821.

53. Lazenby M, Ercolano E, Grant M, et al. Supporting commission on cancer-mandated psychosocial distress screening with implementation strategies. J Oncol Pract 2015;11:e413-420. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25758447.

54. Zebrack B, Kayser K, Bybee D, et al. A practice-based evaluation of distress screening protocol adherence and medical service utilization. J Natl Compr Canc Netw 2017;15:903-912. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28687578.

55. Tavernier SS, Beck SL, Dudley WN. Diffusion of a Distress Management Guideline into practice. Psychooncology 2013;22:2332-2338. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23712894.

56. Knies AK, Jutagir DR, Ercolano E, et al. Barriers and facilitators to implementing the commission on cancer's distress screening program standard. Palliat Support Care 2018:1-9. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29880068.

57. Rodriguez MA, Tortorella F, St John C. Improving psychosocial care for improved health outcomes. J Healthc Qual 2010;32:3-12. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20618566.

58. Frost GW, Zevon MA, Gruber M, Scrivani RA. Use of distress thermometers in an outpatient oncology setting. Health Soc Work 2011;36:293-297. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22308881.

59. Fulcher CD, Gosselin-Acomb TK. Distress assessment: practice change through guideline implementation. Clin J Oncol Nurs 2007;11:817-821. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18063540.

60. Hammelef KJ, Friese CR, Breslin TM, et al. Implementing distress management guidelines in ambulatory oncology: a quality improvement project. Clin J Oncol Nurs 2014;18 Suppl:31-36. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24480661.

61. Hammonds LS. Implementing a distress screening instrument in a university breast cancer clinic: a quality improvement project. Clin J Oncol Nurs 2012;16:491-494. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23022932.

62. Hendrick SS, Cobos E. Practical model for psychosocial care. J Oncol Pract 2010;6:34-36. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20539730.

63. Loscalzo M, Clark KL, Holland J. Successful strategies for implementing biopsychosocial screening. Psychooncology 2011;20:455-462. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21456059.

64. Mehta A, Hamel M. The development and impact of a new Psychosocial Oncology Program. Support Care Cancer 2011;19:1873-1877. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21681386.

65. Wagner LI, Spiegel D, Pearman T. Using the science of psychosocial care to implement the new american college of surgeons commission on cancer distress screening standard. J Natl Compr Canc Netw 2013;11:214-221. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23411387.

66. Ercolano E, Hoffman E, Tan H, et al. Managing psychosocial distress: lessons learned in optimizing screening program implementation. Oncology (Williston Park) 2018;32:488-490, 492-483. Available at: https://www.ncbi.nlm.nih.gov/pubmed/30334237.

67. Deshields T, Kracen A, Nanna S, Kimbro L. Psychosocial staffing at National Comprehensive Cancer Network member institutions: data from leading cancer centers. Psychooncology 2016;25:164-169. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25963109.

68. Zebrack B, Kayser K, Padgett L, et al. Institutional capacity to provide psychosocial oncology support services: A report from the Association of Oncology Social Work. Cancer 2016;122:1937-1945. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27070342.

69. Jacobsen PB. Promoting evidence-based psychosocial care for cancer patients. Psychooncology 2009;18:6-13. Available at: http://www.ncbi.nlm.nih.gov/pubmed/19097140.

70. Neuss MN, Desch CE, McNiff KK, et al. A process for measuring the quality of cancer care: the quality oncology practice initiative. J Clin Oncol 2005;23:6233-6239. Available at: http://www.ncbi.nlm.nih.gov/pubmed/16087948.

71. Jacobsen PB, Shibata D, Siegel EM, et al. Evaluating the quality of psychosocial care in outpatient medical oncology settings using performance indicators. Psychooncology 2011;20:1221-1227. Available at: https://www.ncbi.nlm.nih.gov/pubmed/20878724.

72. Jacobson JO, Neuss MN, McNiff KK, et al. Improvement in oncology practice performance through voluntary participation in the Quality Oncology Practice Initiative. J Clin Oncol 2008;26:1893-1898. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18398155.

73. Blayney DW, McNiff K, Hanauer D, et al. Implementation of the Quality Oncology Practice Initiative at a University Comprehensive Cancer Center. J Clin Oncol 2009;27:3802-3807. Available at: http://www.ncbi.nlm.nih.gov/pubmed/19487377.

74. Jacobsen PB. Improving psychosocial care in outpatient oncology settings. J Natl Compr Canc Netw 2010;8:368-370. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20410332.

75. Carlson LE, Waller A, Mitchell AJ. Screening for distress and unmet needs in patients with cancer: review and recommendations. J Clin Oncol 2012;30:1160-1177. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22412146.

76. Fann JR, Ell K, Sharpe M. Integrating psychosocial care into cancer services. J Clin Oncol 2012;30:1178-1186. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22412139.

77. Lazenby M. The international endorsement of US distress screening and psychosocial guidelines in oncology: a model for dissemination. J Natl Compr Canc Netw 2014;12:221-227. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24586084.

78. Lowery AE, Holland JC. Screening cancer patients for distress: guidelines for routine implementation. Community Oncology 2011;8:502-505. Available at: http://www.oncologypractice.com/fileadmin/content_images/co/articles/0811502.pdf.

79. Groff S, Holroyd-Leduc J, White D, Bultz BD. Examining the sustainability of screening for distress, the sixth vital sign, in two outpatient oncology clinics: A mixed-methods study. Psychooncology 2018;27:141-147. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28128894.

80. Ehlers SL, Davis K, Bluethmann SM, et al. Screening for psychosocial distress among patients with cancer: implications for clinical practice, healthcare policy, and dissemination to enhance cancer survivorship. Transl Behav Med 2018. Available at: https://www.ncbi.nlm.nih.gov/pubmed/30566662.

81. Smith SK, Loscalzo M, Mayer C, Rosenstein DL. Best Practices in Oncology Distress Management: Beyond the Screen. Am Soc Clin Oncol Educ Book 2018:813-821. Available at: https://www.ncbi.nlm.nih.gov/pubmed/30231391.

82. Bultz BD, Carlson LE. Emotional distress: the sixth vital sign in cancer care. J Clin Oncol 2005;23:6440-6441. Available at: http://www.ncbi.nlm.nih.gov/pubmed/16155033.

83. Bultz BD, Groff SL, Fitch M, et al. Implementing screening for distress, the 6th vital sign: a Canadian strategy for changing practice. Psychooncology 2011;20:463-469. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21456060.

84. Fitch MI, Ashbury F, Nicoll I. Reflections on the implementation of screening for distress (sixth vital sign) in Canada: key lessons learned. Support Care Cancer 2018;26:4011-4020. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29858691.

85. Dolbeault S, Boistard B, Meuric J, et al. Screening for distress and supportive care needs during the initial phase of the care process: a qualitative description of a clinical pilot experiment in a French cancer center. Psychooncology 2011;20:585-593. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21425386.

86. Grassi L, Rossi E, Caruso R, et al. Educational intervention in cancer outpatient clinics on routine screening for emotional distress: an observational study. Psychooncology 2011;20:669-674. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21370316.

87. Okuyama T, Kizawa Y, Morita T, et al. Current status of distress screening in designated cancer hospitals: a cross-sectional nationwide survey in Japan. J Natl Compr Canc Netw 2016;14:1098-1104. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27587622.

88. van Nuenen FM, Donofrio SM, Tuinman MA, et al. Feasibility of implementing the 'Screening for Distress and Referral Need' process in 23 Dutch hospitals. Support Care Cancer 2017;25:103-110. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27565789.

89. Meijer A, Roseman M, Delisle VC, et al. Effects of screening for psychological distress on patient outcomes in cancer: a systematic review. J Psychosom Res 2013;75:1-17. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23751231.

90. Bultz BD, Carlson LE. A commentary on 'effects of screening for psychological distress on patient outcomes in cancer: a systematic review'. J Psychosom Res 2013;75:18-19. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23751232.

91. Hollingworth W, Metcalfe C, Mancero S, et al. Are needs assessments cost effective in reducing distress among patients with cancer? A randomized controlled trial using the Distress Thermometer and Problem List. J Clin Oncol 2013;31:3631-3638. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24002506.

92. Carlson LE. Screening alone is not enough: the importance of appropriate triage, referral, and evidence-based treatment of distress and common problems. J Clin Oncol 2013;31:3616-3617. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24002494.

93. Mitchell AJ. Screening for cancer-related distress: when is implementation successful and when is it unsuccessful? Acta Oncol 2013;52:216-224. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23320770.

94. Braeken AP, Kempen GI, Eekers DB, et al. Psychosocial screening effects on health-related outcomes in patients receiving radiotherapy. A cluster randomised controlled trial. Psychooncology 2013;22:2736-2746. Available at: https://www.ncbi.nlm.nih.gov/pubmed/23824561.

95. Mitchell AJ. Pooled results from 38 analyses of the accuracy of distress thermometer and other ultra-short methods of detecting cancer-related mood disorders. J Clin Oncol 2007;25:4670-4681. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17846453.

96. Zabora J, BrintzenhofeSzoc K, Jacobsen P, et al. A new psychosocial screening instrument for use with cancer patients. Psychosomatics 2001;42:241-246. Available at: http://www.ncbi.nlm.nih.gov/pubmed/11351113.

97. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. Acta Psychiatr Scand 1983;67:361-370. Available at: http://www.ncbi.nlm.nih.gov/pubmed/6880820.

98. Shinn EH, Valentine A, Baum G, et al. Comparison of four brief depression screening instruments in ovarian cancer patients: Diagnostic accuracy using traditional versus alternative cutpoints. Gynecol Oncol 2017;145:562-568. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28400146.

99. Syrjala KL, Sutton SK, Jim HS, et al. Cancer and treatment distress psychometric evaluation over time: A BMT CTN 0902 secondary analysis. Cancer 2017;123:1416-1423. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27893933.

100. Braeken AP, Lechner L, Eekers DB, et al. Does routine psychosocial screening improve referral to psychosocial care providers and patient-radiotherapist communication? A cluster randomized controlled trial. Patient Educ Couns 2013;93:289-297. Available at: https://www.ncbi.nlm.nih.gov/pubmed/23992914.

101. Mitchell AJ, Kaar S, Coggan C, Herdman J. Acceptability of common screening methods used to detect distress and related mood disorders-preferences of cancer specialists and non-specialists. Psychooncology 2008;17:226-236. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17575565.

102. Mitchell AJ. Short screening tools for cancer-related distress: a review and diagnostic validity meta-analysis. J Natl Compr Canc Netw 2010;8:487-494. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20410338.

103. Wells-Di Gregorio S, Porensky EK, Minotti M, et al. The James Supportive Care Screening: integrating science and practice to meet the NCCN guidelines for distress management at a Comprehensive Cancer Center. Psychooncology 2013;22:2001-2008. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23436568.

104. Berry DL, Hong F, Halpenny B, et al. Electronic self-report assessment for cancer and self-care support: results of a multicenter randomized trial. J Clin Oncol 2014;32:199-205. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24344222.

105. Carlson LE, Waller A, Groff SL, et al. Online screening for distress, the 6th vital sign, in newly diagnosed oncology outpatients: randomised controlled trial of computerised vs personalised triage. Br J Cancer 2012;107:617-625. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22828610.

106. Loscalzo M, Clark K, Dillehunt J, et al. SupportScreen: a model for improving patient outcomes. J Natl Compr Canc Netw 2010;8:496-504. Available at: http://www.jnccn.org/content/8/4/496.abstract.

107. Lundy JJ, Coons SJ, Aaronson NK. Testing the measurement equivalence of paper and interactive voice response system versions of the EORTC QLQ-C30. Qual Life Res 2014;23:229-237. Available at: https://www.ncbi.nlm.nih.gov/pubmed/23765449.

108. Miller MF, Buzaglo JS, Clark KL, et al. Demonstrating the psychometric properties of a problem-related distress screener in a community sample of 319 cancer survivors. Psychooncology 2013;22:1249-1257. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22736627.

109. Ma X, Zhang J, Zhong W, et al. The diagnostic role of a short screening tool-the distress thermometer: a meta-analysis. Support Care Cancer 2014;22:1741-1755. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24510195.

110. Ploos van Amstel FK, Tol J, Sessink KH, et al. A specific distress cutoff score shortly after breast cancer diagnosis. Cancer Nurs 2017;40:E35-e40. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27135753.

111. Ransom S, Jacobsen PB, Booth-Jones M. Validation of the Distress Thermometer with bone marrow transplant patients. Psychooncology 2006;15:604-612. Available at: http://www.ncbi.nlm.nih.gov/pubmed/16208733.

112. Trask PC, Paterson A, Riba M, et al. Assessment of psychological distress in prospective bone marrow transplant patients. Bone Marrow

Transplant 2002;29:917-925. Available at: http://www.ncbi.nlm.nih.gov/pubmed/12080358.

113. Akizuki N, Akechi T, Nakanishi T, et al. Development of a brief screening interview for adjustment disorders and major depression in patients with cancer. Cancer 2003;97:2605-2613. Available at: http://www.ncbi.nlm.nih.gov/pubmed/12733160.

114. Chambers SK, Zajdlewicz L, Youlden DR, et al. The validity of the distress thermometer in prostate cancer populations. Psychooncology 2014;23:195-203. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24027194.

115. Dabrowski M, Boucher K, Ward JH, et al. Clinical experience with the NCCN distress thermometer in breast cancer patients. J Natl Compr Canc Netw 2007;5:104-111. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17239330.

116. Deng YT, Zhong WN, Jiang Y. Measurement of distress and its alteration during treatment in patients with nasopharyngeal carcinoma. Head Neck 2014;36:1077-1086. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23804505.

117. Grassi L, Johansen C, Annunziata MA, et al. Screening for distress in cancer patients: a multicenter, nationwide study in Italy. Cancer 2013;119:1714-1721. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23423789.

118. Hoffman BM, Zevon MA, D'Arrigo MC, Cecchini TB. Screening for distress in cancer patients: the NCCN rapid-screening measure. Psychooncology 2004;13:792-799. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15386639.

119. Iskandarsyah A, de Klerk C, Suardi DR, et al. The Distress Thermometer and its validity: a first psychometric study in Indonesian women with breast cancer. PLoS One 2013;8:e56353. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23418561.

120. Jacobsen PB, Donovan KA, Trask PC, et al. Screening for psychologic distress in ambulatory cancer patients. Cancer 2005;103:1494-1502. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15726544.

121. Lim HA, Mahendran R, Chua J, et al. The Distress Thermometer as an ultra-short screening tool: a first validation study for mixed-cancer outpatients in Singapore. Compr Psychiatry 2014;55:1055-1062. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24556515.

122. Martinez P, Galdon MJ, Andreu Y, Ibanez E. The Distress Thermometer in Spanish cancer patients: convergent validity and diagnostic accuracy. Support Care Cancer 2013;21:3095-3102. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23832312.

123. Patrick-Miller LJ, Broccoli TL, Much JK, Levine E. Validation of the Distress Thermometer: A single item screen to detect clinically significant psychological distress in ambulatory oncology patients [abstract]. J Clin Oncol 2004;22 (Suppl_14):6024. Available at: http://meeting.jco.org/cgi/content/abstract/22/14_suppl/6024.

124. Roth AJ, Kornblith AB, Batel-Copel L, et al. Rapid screening for psychologic distress in men with prostate carcinoma: a pilot study. Cancer 1998;82:1904-1908. Available at: http://www.ncbi.nlm.nih.gov/pubmed/9587123.

125. Thalen-Lindstrom A, Larsson G, Hellbom M, et al. Validation of the Distress Thermometer in a Swedish population of oncology patients; accuracy of changes during six months. Eur J Oncol Nurs 2013;17:625-631. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23343788.

126. Wang Y, Zou L, Jiang M, et al. Measurement of distress in Chinese inpatients with lymphoma. Psychooncology 2013;22:1581-1586. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22936310.

127. Zwahlen D, Hagenbuch N, Carley MI, et al. Screening cancer patients' families with the distress thermometer (DT): a validation study. Psychooncology 2008;17:959-966. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18203146.

128. Lotfi-Jam K, Gough K, Schofield P, Aranda S. Profile and predictors of global distress: can the DT guide nursing practice in prostate cancer? Palliat Support Care 2014;12:5-14. Available at: https://www.ncbi.nlm.nih.gov/pubmed/23919955.

129. Olesen ML, Hansen MK, Hansson H, et al. The distress thermometer in survivors of gynaecological cancer: accuracy in screening and association with the need for person-centred support. Support Care Cancer 2018;26:1143-1150. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29058130.

130. Linehan K, Fennell KM, Hughes DL, Wilson CJ. Use of the Distress Thermometer in a cancer helpline context: Can it detect changes in distress, is it acceptable to nurses and callers, and do high scores lead to internal referrals? Eur J Oncol Nurs 2017;26:49-55. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28069152.

131. Wagner LI, Pugh SL, Small W, Jr., et al. Screening for depression in cancer patients receiving radiotherapy: Feasibility and identification of effective tools in the NRG Oncology RTOG 0841 trial. Cancer 2017;123:485-493. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27861753.

132. Clover KA, Oldmeadow C, Nelson L, et al. Which items on the distress thermometer problem list are the most distressing? Support Care Cancer 2016;24:4549-4557. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27260016.

133. Graves KD, Arnold SM, Love CL, et al. Distress screening in a multidisciplinary lung cancer clinic: prevalence and predictors of clinically significant distress. Lung Cancer 2007;55:215-224. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17084483.

134. Tuinman MA, Gazendam-Donofrio SM, Hoekstra-Weebers JE. Screening and referral for psychosocial distress in oncologic practice: use of the Distress Thermometer. Cancer 2008;113:870-878. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18618581.

135. Janelsins MC, Kohli S, Mohile SG, et al. An update on cancer- and chemotherapy-related cognitive dysfunction: current status. Semin Oncol 2011;38:431-438. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21600374.

136. Wefel JS, Vardy J, Ahles T, Schagen SB. International Cognition and Cancer Task Force recommendations to harmonise studies of cognitive function in patients with cancer. Lancet Oncol 2011;12:703-708. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21354373.

137. Hodgson KD, Hutchinson AD, Wilson CJ, Nettelbeck T. A meta-analysis of the effects of chemotherapy on cognition in patients with cancer. Cancer Treat Rev 2013;39:297-304. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23219452.

138. de Ruiter MB, Schagen SB. Functional MRI studies in non-CNS cancers. Brain Imaging Behav 2013;7:388-408. Available at: https://www.ncbi.nlm.nih.gov/pubmed/23996156.

139. Wefel JS, Kesler SR, Noll KR, Schagen SB. Clinical characteristics, pathophysiology, and management of noncentral nervous system cancer-related cognitive impairment in adults. CA Cancer J Clin 2015;65:123-138. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25483452.

140. Vardy JL, Dhillon HM, Pond GR, et al. Cognitive Function in Patients With Colorectal Cancer Who Do and Do Not Receive Chemotherapy: A Prospective, Longitudinal, Controlled Study. J Clin Oncol 2015;33:4085-4092. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26527785.

141. Janelsins MC, Heckler CE, Peppone LJ, et al. Cognitive complaints in survivors of breast cancer after chemotherapy compared with age-matched controls: an analysis from a nationwide, multicenter, prospective longitudinal study. J Clin Oncol 2016:Jco2016685856. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28029304.

142. Amidi A, Christensen S, Mehlsen M, et al. Long-term subjective cognitive functioning following adjuvant systemic treatment: 7-9 years follow-up of a nationwide cohort of women treated for primary breast

cancer. Br J Cancer 2015;113:794-801. Available at: http://www.ncbi.nlm.nih.gov/pubmed/26171932.

143. Ahles TA, Saykin AJ. Candidate mechanisms for chemotherapy-induced cognitive changes. Nat Rev Cancer 2007;7:192-201. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17318212.

144. Deprez S, Vandenbulcke M, Peeters R, et al. Longitudinal assessment of chemotherapy-induced alterations in brain activation during multitasking and its relation with cognitive complaints. J Clin Oncol 2014;32:2031-2038. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24868029.

145. Ahles TA, Saykin AJ, McDonald BC, et al. Cognitive function in breast cancer patients prior to adjuvant treatment. Breast Cancer Res Treat 2008;110:143-152. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17674194.

146. Ahles TA, Saykin AJ, McDonald BC, et al. Longitudinal assessment of cognitive changes associated with adjuvant treatment for breast cancer: impact of age and cognitive reserve. J Clin Oncol 2010;28:4434-4440. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20837957.

147. Wefel JS, Lenzi R, Theriault R, et al. 'Chemobrain' in breast carcinoma?: a prologue. Cancer 2004;101:466-475. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15274059.

148. Wefel JS, Lenzi R, Theriault RL, et al. The cognitive sequelae of standard-dose adjuvant chemotherapy in women with breast carcinoma: results of a prospective, randomized, longitudinal trial. Cancer 2004;100:2292-2299. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15160331.

149. McGinty HL, Phillips KM, Jim HS, et al. Cognitive functioning in men receiving androgen deprivation therapy for prostate cancer: a systematic review and meta-analysis. Support Care Cancer 2014;22:2271-2280. Available at: https://www.ncbi.nlm.nih.gov/pubmed/24859915.

150. Jean-Pierre P, Winters PC, Ahles TA, et al. Prevalence of self-reported memory problems in adult cancer survivors: a national cross-sectional study. J Oncol Pract 2012;8:30-34. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22548008.

151. Hermelink K, Voigt V, Kaste J, et al. Elucidating pretreatment cognitive impairment in breast cancer patients: the impact of cancer-related post-traumatic stress. J Natl Cancer Inst 2015;107. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25882713.

152. Hermelink K, Buhner M, Sckopke P, et al. Chemotherapy and post-traumatic stress in the causation of cognitive dysfunction in breast cancer patients. J Natl Cancer Inst 2017;109. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28521364.

153. Nelson CJ, Nandy N, Roth AJ. Chemotherapy and cognitive deficits: mechanisms, findings, and potential interventions. Palliat Support Care 2007;5:273-280. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17969831.

154. Treanor CJ, McMenamin UC, O'Neill RF, et al. Non-pharmacological interventions for cognitive impairment due to systemic cancer treatment. Cochrane Database Syst Rev 2016:Cd011325. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27529826.

155. Ferguson RJ, McDonald BC, Rocque MA, et al. Development of CBT for chemotherapy-related cognitive change: results of a waitlist control trial. Psychooncology 2012;21:176-186. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22271538.

156. Gehring K, Roukema JA, Sitskoorn MM. Review of recent studies on interventions for cognitive deficits in patients with cancer. Expert Rev Anticancer Ther 2012;12:255-269. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22316373.

157. Hines S, Ramis MA, Pike S, Chang AM. The effectiveness of psychosocial interventions for cognitive dysfunction in cancer patients who have received chemotherapy: a systematic review. Worldviews Evid

Based Nurs 2014;11:187-193. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24842532.

158. Bray VJ, Dhillon HM, Bell ML, et al. Evaluation of a web-based cognitive rehabilitation program in cancer survivors reporting cognitive symptoms after chemotherapy. J Clin Oncol 2017;35:217-225. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28056205.

159. Conklin HM, Khan RB, Reddick WE, et al. Acute neurocognitive response to methylphenidate among survivors of childhood cancer: a randomized, double-blind, cross-over trial. J Pediatr Psychol 2007;32:1127-1139. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17569711.

160. Davis J, Ahlberg FM, Berk M, et al. Emerging pharmacotherapy for cancer patients with cognitive dysfunction. BMC Neurol 2013;13:153. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24156319.

161. Gehring K, Patwardhan SY, Collins R, et al. A randomized trial on the efficacy of methylphenidate and modafinil for improving cognitive functioning and symptoms in patients with a primary brain tumor. J Neurooncol 2012;107:165-174. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21964738.

162. Kohli S, Fisher SG, Tra Y, et al. The effect of modafinil on cognitive function in breast cancer survivors. Cancer 2009;115:2605-2616. Available at: http://www.ncbi.nlm.nih.gov/pubmed/19309747.

163. Lundorff LE, Jonsson BH, Sjogren P. Modafinil for attentional and psychomotor dysfunction in advanced cancer: a double-blind, randomised, cross-over trial. Palliat Med 2009;23:731-738. Available at: http://www.ncbi.nlm.nih.gov/pubmed/19648224.

164. Mar Fan HG, Clemons M, Xu W, et al. A randomised, placebo-controlled, double-blind trial of the effects of d-methylphenidate on fatigue and cognitive dysfunction in women undergoing adjuvant chemotherapy for breast cancer. Support Care Cancer 2008;16:577-583. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17972110.

165. Shaw EG, Rosdhal R, D'Agostino RB, Jr., et al. Phase II study of donepezil in irradiated brain tumor patients: effect on cognitive function, mood, and quality of life. J Clin Oncol 2006;24:1415-1420. Available at: http://www.ncbi.nlm.nih.gov/pubmed/16549835.

166. Vardy J, Wefel JS, Ahles T, et al. Cancer and cancer-therapy related cognitive dysfunction: an international perspective from the Venice cognitive workshop. Ann Oncol 2008;19:623-629. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17974553.

167. Lee SJ, Schover LR, Partridge AH, et al. American Society of Clinical Oncology recommendations on fertility preservation in cancer patients. J Clin Oncol 2006;24:2917-2931. Available at: http://www.ncbi.nlm.nih.gov/pubmed/16651642.

168. Association AP. Diagnostic and Statistical Manual of Mental Disorders (ed 5th). Arlington, VA: American Psychiatric Association; 2013.

169. Carrera PM, Kantarjian HM, Blinder VS. The financial burden and distress of patients with cancer: Understanding and stepping-up action on the financial toxicity of cancer treatment. CA Cancer J Clin 2018;68:153-165. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29338071.

170. Gordon LG, Merollini KMD, Lowe A, Chan RJ. A systematic review of financial toxicity among cancer survivors: we can't pay the co-pay. Patient 2017;10:295-309. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27798816.

171. Altice CK, Banegas MP, Tucker-Seeley RD, Yabroff KR. Financial hardships experienced by cancer survivors: a systematic review. J Natl Cancer Inst 2017;109. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27754926.

172. Yabroff KR, Dowling EC, Guy GP, Jr., et al. Financial hardship associated with cancer in the United States: findings from a population-based sample of adult cancer survivors. J Clin Oncol 2016;34:259-267. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26644532.

173. Back AL, Arnold RM, Baile WF, et al. Approaching difficult communication tasks in oncology. CA Cancer J Clin 2005;55:164-177. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15890639.

174. Ryan H, Schofield P, Cockburn J, et al. How to recognize and manage psychological distress in cancer patients. Eur J Cancer Care (Engl) 2005;14:7-15. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15698382.

175. Fujimori M, Shirai Y, Asai M, et al. Effect of communication skills training program for oncologists based on patient preferences for communication when receiving bad news: a randomized controlled trial. J Clin Oncol 2014;32:2166-2172. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24912901.

176. Kissane DW, Bylund CL, Banerjee SC, et al. Communication skills training for oncology professionals. J Clin Oncol 2012;30:1242-1247. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22412145.

177. Kornblith AB, Dowell JM, Herndon JE, 2nd, et al. Telephone monitoring of distress in patients aged 65 years or older with advanced stage cancer: a cancer and leukemia group B study. Cancer 2006;107:2706-2714. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17078057.

178. Faller H, Schuler M, Richard M, et al. Effects of psycho-oncologic interventions on emotional distress and quality of life in adult patients with cancer: systematic review and meta-analysis. J Clin Oncol 2013;31:782-793. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23319686.

179. Galway K, Black A, Cantwell M, et al. Psychosocial interventions to improve quality of life and emotional wellbeing for recently diagnosed cancer patients. Cochrane Database Syst Rev 2012;11:Cd007064. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23152241.

180. Heron-Speirs HA, Harvey ST, Baken DM. Moderators of psycho-oncology therapy effectiveness: meta-analysis of therapy characteristics. J Psychosoc Oncol 2013;31:617-641. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24175899.

181. Matthews H, Grunfeld EA, Turner A. The efficacy of interventions to improve psychosocial outcomes following surgical treatment for breast cancer: a systematic review and meta-analysis. Psychooncology 2016. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27333194.

182. Chien CH, Liu KL, Chien HT, Liu HE. The effects of psychosocial strategies on anxiety and depression of patients diagnosed with prostate cancer: a systematic review. Int J Nurs Stud 2014;51:28-38. Available at: https://www.ncbi.nlm.nih.gov/pubmed/23398917.

183. Parahoo K, McDonough S, McCaughan E, et al. Psychosocial interventions for men with prostate cancer. Cochrane Database Syst Rev 2013;12:Cd008529. Available at: https://www.ncbi.nlm.nih.gov/pubmed/24368598.

184. Brebach R, Sharpe L, Costa DS, et al. Psychological intervention targeting distress for cancer patients: a meta-analytic study investigating uptake and adherence. Psychooncology 2016. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26893285.

185. Gielissen MF, Verhagen CA, Bleijenberg G. Cognitive behaviour therapy for fatigued cancer survivors: long-term follow-up. Br J Cancer 2007;97:612-618. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17653075.

186. Greer JA, Traeger L, Bemis H, et al. A pilot randomized controlled trial of brief cognitive-behavioral therapy for anxiety in patients with terminal cancer. Oncologist 2012;17:1337-1345. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22688670.

187. Stagl JM, Antoni MH, Lechner SC, et al. Randomized controlled trial of cognitive behavioral stress management in breast cancer: a brief report of effects on 5-year depressive symptoms. Health Psychol 2015;34:176-180. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25068452.

188. Stagl JM, Bouchard LC, Lechner SC, et al. Long-term psychological benefits of cognitive-behavioral stress management for women with breast cancer: 11-year follow-up of a randomized controlled trial. Cancer

2015;121:1873-1881. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25809235.

189. Carlson LE, Tamagawa R, Stephen J, et al. Randomized-controlled trial of mindfulness-based cancer recovery versus supportive expressive group therapy among distressed breast cancer survivors (MINDSET): long-term follow-up results. Psychooncology 2016;25:750-759. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27193737.

190. Schellekens MPJ, Tamagawa R, Labelle LE, et al. Mindfulness-based cancer recovery (MBCR) versus supportive expressive group therapy (SET) for distressed breast cancer survivors: evaluating mindfulness and social support as mediators. J Behav Med 2017;40:414-422. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27722908.

191. Schellekens MPJ, van den Hurk DGM, Prins JB, et al. Mindfulness-based stress reduction added to care as usual for lung cancer patients and/or their partners: A multicentre randomized controlled trial. Psychooncology 2017;26:2118-2126. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28337821.

192. Chambers SK, Occhipinti S, Foley E, et al. Mindfulness-based cognitive therapy in advanced prostate cancer: a randomized controlled trial. J Clin Oncol 2017;35:291-297. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27870567.

193. Jassim GA, Whitford DL, Hickey A, Carter B. Psychological interventions for women with non-metastatic breast cancer. Cochrane Database Syst Rev 2015;5:Cd008729. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26017383.

194. Haller H, Winkler MM, Klose P, et al. Mindfulness-based interventions for women with breast cancer: an updated systematic review and meta-analysis. Acta Oncol 2017;56:1665-1676. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28686520.

195. Beatty L, Koczwara B, Wade T. Evaluating the efficacy of a self-guided Web-based CBT intervention for reducing cancer-distress: a randomised controlled trial. Support Care Cancer 2016;24:1043-1051. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26248651.

196. Ferguson RJ, Ahles TA, Saykin AJ, et al. Cognitive-behavioral management of chemotherapy-related cognitive change. Psychooncology 2007;16:772-777. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17152119.

197. Ferguson RJ, Sigmon ST, Pritchard AJ, et al. A randomized trial of videoconference-delivered cognitive behavioral therapy for survivors of breast cancer with self-reported cognitive dysfunction. Cancer 2016;122:1782-1791. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27135464.

198. Goodwin PJ, Leszcz M, Ennis M, et al. The effect of group psychosocial support on survival in metastatic breast cancer. N Engl J Med 2001;345:1719-1726. Available at: http://www.ncbi.nlm.nih.gov/pubmed/11742045.

199. Kissane DW, Grabsch B, Clarke DM, et al. Supportive-expressive group therapy for women with metastatic breast cancer: survival and psychosocial outcome from a randomized controlled trial. Psychooncology 2007;16:277-286. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17385190.

200. Rini C, Austin J, Wu LM, et al. Harnessing benefits of helping others: a randomized controlled trial testing expressive helping to address survivorship problems after hematopoietic stem cell transplant. Health Psychol 2014;33:1541-1551. Available at: https://www.ncbi.nlm.nih.gov/pubmed/24274798.

201. Kissane DW, Bloch S, Smith GC, et al. Cognitive-existential group psychotherapy for women with primary breast cancer: a randomised controlled trial. Psychooncology 2003;12:532-546. Available at: http://www.ncbi.nlm.nih.gov/pubmed/12923794.

202. Breitbart W, Rosenfeld B, Gibson C, et al. Meaning-centered group psychotherapy for patients with advanced cancer: a pilot randomized

controlled trial. Psychooncology 2010;19:21-28. Available at: https://www.ncbi.nlm.nih.gov/pubmed/19274623.

203. Breitbart W, Poppito S, Rosenfeld B, et al. Pilot randomized controlled trial of individual meaning-centered psychotherapy for patients with advanced cancer. J Clin Oncol 2012;30:1304-1309. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22370330.

204. Breitbart W, Rosenfeld B, Pessin H, et al. Meaning-centered group psychotherapy: an effective intervention for improving psychological well-being in patients with advanced cancer. J Clin Oncol 2015;33:749-754. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25646186.

205. Breitbart W, Pessin H, Rosenfeld B, et al. Individual meaning-centered psychotherapy for the treatment of psychological and existential distress: A randomized controlled trial in patients with advanced cancer. Cancer 2018;124:3231-3239. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29757459.

206. Chochinov HM, Kristjanson LJ, Breitbart W, et al. Effect of dignity therapy on distress and end-of-life experience in terminally ill patients: a randomised controlled trial. Lancet Oncol 2011;12:753-762. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21741309.

207. Milbury K, Spelman A, Wood C, et al. Randomized controlled trial of expressive writing for patients with renal cell carcinoma. J Clin Oncol 2014;32:663-670. Available at: https://www.ncbi.nlm.nih.gov/pubmed/24470003.

208. Milbury K, Lopez G, Spelman A, et al. Examination of moderators of expressive writing in patients with renal cell carcinoma: the role of depression and social support. Psychooncology 2017;26:1361-1368. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27145447.

209. Lo C, Hales S, Jung J, et al. Managing Cancer And Living Meaningfully (CALM): phase 2 trial of a brief individual psychotherapy for patients with advanced cancer. Palliat Med 2014;28:234-242. Available at: https://www.ncbi.nlm.nih.gov/pubmed/24170718.

210. Hong Y, Pena-Purcell NC, Ory MG. Outcomes of online support and resources for cancer survivors: a systematic literature review. Patient Educ Couns 2012;86:288-296. Available at: https://www.ncbi.nlm.nih.gov/pubmed/21798685.

211. McCaughan E, Parahoo K, Hueter I, et al. Online support groups for women with breast cancer. Cochrane Database Syst Rev 2017;3:Cd011652. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28278559.

212. Lepore SJ, Buzaglo JS, Lieberman MA, et al. Comparing standard versus prosocial internet support groups for patients with breast cancer: a randomized controlled trial of the helper therapy principle. J Clin Oncol 2014;32:4081-4086. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25403218.

213. Chambers SK, Girgis A, Occhipinti S, et al. A randomized trial comparing two low-intensity psychological interventions for distressed patients with cancer and their caregivers. Oncol Nurs Forum 2014;41:E256-266. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24969260.

214. van den Berg SW, Gielissen MF, Ottevanger PB, Prins JB. Rationale of the BREAst cancer e-healTH [BREATH] multicentre randomised controlled trial: an internet-based self-management intervention to foster adjustment after curative breast cancer by decreasing distress and increasing empowerment. BMC Cancer 2012;12:394. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22958799.

215. Fawzy FI, Fawzy NW. A structured psychoeducational intervention for cancer patients. Gen Hosp Psychiatry 1994;16:149-192. Available at: https://www.ncbi.nlm.nih.gov/pubmed/8063085.

216. Boesen EH, Ross L, Frederiksen K, et al. Psychoeducational intervention for patients with cutaneous malignant melanoma: a replication study. J Clin Oncol 2005;23:1270-1277. Available at: https://www.ncbi.nlm.nih.gov/pubmed/15718325.

217. Helgeson VS, Cohen S, Schulz R, Yasko J. Education and peer discussion group interventions and adjustment to breast cancer. Arch Gen Psychiatry 1999;56:340-347. Available at: http://www.ncbi.nlm.nih.gov/pubmed/10197829.

218. van der Meulen IC, May AM, de Leeuw JR, et al. Long-term effect of a nurse-led psychosocial intervention on health-related quality of life in patients with head and neck cancer: a randomised controlled trial. Br J Cancer 2014;110:593-601. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24280999.

219. Borosund E, Cvancarova M, Moore SM, et al. Comparing effects in regular practice of e-communication and Web-based self-management support among breast cancer patients: preliminary results from a randomized controlled trial. J Med Internet Res 2014;16:e295. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25525672.

220. Fann JR, Hong F, Halpenny B, et al. Psychosocial outcomes of an electronic self-report assessment and self-care intervention for patients with cancer: a randomized controlled trial. Psychooncology 2016. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27530529.

221. Urech C, Grossert A, Alder J, et al. Web-based stress management for newly diagnosed patients with cancer (STREAM): a randomized, wait-list controlled intervention study. J Clin Oncol 2018;36:780-788. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29369731.

222. Ferrer RA, Huedo-Medina TB, Johnson BT, et al. Exercise interventions for cancer survivors: a meta-analysis of quality of life outcomes. Ann Behav Med 2011;41:32-47. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20931309.

223. Rock CL, Doyle C, Demark-Wahnefried W, et al. Nutrition and physical activity guidelines for cancer survivors. CA Cancer J Clin 2012;62:242-274. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22539238.

224. Schmitz KH, Courneya KS, Matthews C, et al. American College of Sports Medicine roundtable on exercise guidelines for cancer survivors. Med Sci Sports Exerc 2010;42:1409-1426. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20559064.

225. Chen HM, Tsai CM, Wu YC, et al. Randomised controlled trial on the effectiveness of home-based walking exercise on anxiety, depression and cancer-related symptoms in patients with lung cancer. Br J Cancer 2015;112:438-445. Available at: http://www.ncbi.nlm.nih.gov/pubmed/25490525.

226. Livingston PM, Craike MJ, Salmon J, et al. Effects of a clinician referral and exercise program for men who have completed active treatment for prostate cancer: A multicenter cluster randomized controlled trial (ENGAGE). Cancer 2015;121:2646-2654. Available at: http://www.ncbi.nlm.nih.gov/pubmed/25877784.

227. Rogers LQ, Courneya KS, Anton PM, et al. Effects of a multicomponent physical activity behavior change intervention on fatigue, anxiety, and depressive symptomatology in breast cancer survivors: randomized trial. Psychooncology 2016. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27530961.

228. Bergenthal N, Will A, Streckmann F, et al. Aerobic physical exercise for adult patients with haematological malignancies. Cochrane Database Syst Rev 2014;11:Cd009075. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25386666.

229. Manne SL, Ostroff JS, Norton TR, et al. Cancer-related relationship communication in couples coping with early stage breast cancer. Psychooncology 2006;15:234-247. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15926198.

230. Couper J, Collins A, Bloch S, et al. Cognitive existential couple therapy (CECT) in men and partners facing localised prostate cancer: a randomised controlled trial. BJU Int 2015;115 Suppl 5:35-45. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25828172.

231. McLean LM, Walton T, Rodin G, et al. A couple-based intervention for patients and caregivers facing end-stage cancer: outcomes of a

randomized controlled trial. Psychooncology 2013;22:28-38. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21919119.

232. Badr H, Smith CB, Goldstein NE, et al. Dyadic psychosocial intervention for advanced lung cancer patients and their family caregivers: results of a randomized pilot trial. Cancer 2015;121:150-158. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25209975.

233. Kissane DW, McKenzie M, Bloch S, et al. Family focused grief therapy: a randomized, controlled trial in palliative care and bereavement. Am J Psychiatry 2006;163:1208-1218. Available at: http://www.ncbi.nlm.nih.gov/pubmed/16816226.

234. Wang F, Luo D, Fu L, et al. The efficacy of couple-based interventions on health-related quality of life in cancer patients and their spouses: a meta-analysis of 12 randomized controlled trials. Cancer Nurs 2017;40:39-47. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26925996.

235. Regan TW, Lambert SD, Girgis A, et al. Do couple-based interventions make a difference for couples affected by cancer?: a systematic review. BMC Cancer 2012;12:279. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22769228.

236. Brandao T, Schulz MS, Matos PM. Psychological intervention with couples coping with breast cancer: a systematic review. Psychol Health 2014;29:491-516. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24279379.

237. Jacobsen PB, Donovan KA, Swaine ZN, Watson IS. Management of Anxiety and Depression in Adult Cancer Patients: Toward an Evidence-Based Approach. In: Chang AE, Hayes DF, Pass HI, et al., eds. Oncology: Springer New York; 2006:1561-1588.

238. Ng CG, Boks MP, Zainal NZ, de Wit NJ. The prevalence and pharmacotherapy of depression in cancer patients. J Affect Disord 2011;131:1-7. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20732716.

239. Pirl WF. Evidence report on the occurrence, assessment, and treatment of depression in cancer patients. J Natl Cancer Inst Monogr 2004:32-39. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15263039.

240. Rayner L, Price A, Evans A, et al. Antidepressants for depression in physically ill people. Cochrane Database Syst Rev 2010;3:CD007503. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20238354.

241. Rayner L, Price A, Evans A, et al. Antidepressants for the treatment of depression in palliative care: systematic review and meta-analysis. Palliat Med 2010;25:36-51. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20935027.

242. Rodin G, Katz M, Lloyd N, et al. Treatment of depression in cancer patients. Curr Oncol 2007;14:180-188. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17938701.

243. Williams S, Dale J. The effectiveness of treatment for depression/depressive symptoms in adults with cancer: a systematic review. Br J Cancer 2006;94:372-390. Available at: http://www.ncbi.nlm.nih.gov/pubmed/16465173.

244. Holland JC, Morrow GR, Schmale A, et al. A randomized clinical trial of alprazolam versus progressive muscle relaxation in cancer patients with anxiety and depressive symptoms. J Clin Oncol 1991;9:1004-1011. Available at: http://www.ncbi.nlm.nih.gov/pubmed/2033413.

245. Wald TG, Kathol RG, Noyes R, Jr., et al. Rapid relief of anxiety in cancer patients with both alprazolam and placebo. Psychosomatics 1993;34:324-332. Available at: http://www.ncbi.nlm.nih.gov/pubmed/8351307.

246. Fisch MJ, Loehrer PJ, Kristeller J, et al. Fluoxetine versus placebo in advanced cancer outpatients: a double-blinded trial of the Hoosier Oncology Group. J Clin Oncol 2003;21:1937-1943. Available at: http://www.ncbi.nlm.nih.gov/pubmed/12743146.

247. Holland JC, Romano SJ, Heiligenstein JH, et al. A controlled trial of fluoxetine and desipramine in depressed women with advanced cancer.

Psychooncology 1998;7:291-300. Available at: http://www.ncbi.nlm.nih.gov/pubmed/9741068.

248. Sanjida S, Janda M, Kissane D, et al. A systematic review and meta-analysis of prescribing practices of antidepressants in cancer patients. Psychooncology 2016;25:1002-1016. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26775715.

249. Schwartz AL, Thompson JA, Masood N. Interferon-induced fatigue in patients with melanoma: a pilot study of exercise and methylphenidate. Oncol Nurs Forum 2002;29:E85-90. Available at: http://www.ncbi.nlm.nih.gov/pubmed/12183762.

250. Butler JM, Jr., Case LD, Atkins J, et al. A phase III, double-blind, placebo-controlled prospective randomized clinical trial of d-threo-methylphenidate HCl in brain tumor patients receiving radiation therapy. Int J Radiat Oncol Biol Phys 2007;69:1496-1501. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17869448.

251. Moraska AR, Sood A, Dakhil SR, et al. Phase III, randomized, double-blind, placebo-controlled study of long-acting methylphenidate for cancer-related fatigue: North Central Cancer Treatment Group NCCTG-N05C7 trial. J Clin Oncol 2010;28:3673-3679. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20625123.

252. Qu D, Zhang Z, Yu X, et al. Psychotropic drugs for the management of cancer-related fatigue: a systematic review and meta-analysis. Eur J Cancer Care (Engl) 2016;25:970-979. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26490083.

253. Minton O, Richardson A, Sharpe M, et al. Drug therapy for the management of cancer-related fatigue. Cochrane Database Syst Rev 2010:CD006704. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20614448.

254. Greenlee H, Balneaves LG, Carlson LE, et al. Clinical practice guidelines on the use of integrative therapies as supportive care in patients treated for breast cancer. J Natl Cancer Inst Monogr 2014;2014:346-358. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25749602.

255. Greenlee H, DuPont-Reyes MJ, Balneaves LG, et al. Clinical practice guidelines on the evidence-based use of integrative therapies during and after breast cancer treatment. CA Cancer J Clin 2017;67:194-232. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28436999.

256. Bradt J, Dileo C, Magill L, Teague A. Music interventions for improving psychological and physical outcomes in cancer patients. Cochrane Database Syst Rev 2016:Cd006911. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27524661.

257. Pan Y, Yang K, Wang Y, et al. Could yoga practice improve treatment-related side effects and quality of life for women with breast cancer? A systematic review and meta-analysis. Asia Pac J Clin Oncol 2017;13:e79-e95. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25560636.

258. Cramer H, Lauche R, Klose P, et al. Yoga for improving health-related quality of life, mental health and cancer-related symptoms in women diagnosed with breast cancer. Cochrane Database Syst Rev 2017;1:Cd010802. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28045199.

259. Cramer H, Pokhrel B, Fester C, et al. A randomized controlled bicenter trial of yoga for patients with colorectal cancer. Psychooncology 2016;25:412-420. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26228466.

260. Grassi L, Nanni MG. Demoralization syndrome: new insights in psychosocial cancer care. Cancer 2016;122:2130-2133. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27171755.

261. Robinson S, Kissane DW, Brooker J, Burney S. A systematic review of the demoralization syndrome in individuals with progressive disease and cancer: a decade of research. J Pain Symptom Manage 2015;49:595-610. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25131888.

262. Weinstein LC, Stefancic A, Cunningham AT, et al. Cancer screening, prevention, and treatment in people with mental illness. CA Cancer J Clin 2016;66:134-151. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26663383.

263. Iglay K, Santorelli ML, Hirshfield KM, et al. Impact of preexisting mental illness on all-cause and breast cancer-specific mortality in elderly patients with breast cancer. J Clin Oncol 2017:Jco2017734947. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28934000.

264. Howard LM, Barley EA, Davies E, et al. Cancer diagnosis in people with severe mental illness: practical and ethical issues. Lancet Oncol 2010;11:797-804. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20599423.

265. Holland JC, Golant M, Greenberg DB, et al., eds. Psycho-Oncology: A quick reference on the psychosocial dimensions of cancer symptom management. In: APOS, ed. APOS Clinical Reference Handbooks (ed 2): Oxford University Press; 2015.

266. Holland JC, Breitbart WS, Butow PN, et al., eds. Psycho-Oncology (ed 3): Oxford University Press; 2015.

267. Holland JC, Weiss Wiesel T, Nelson CJ, et al., eds. Geriatric Psycho-Oncology: A quick reference on the psychosocial dimensions of cancer symptom management. In: APOS, ed. APOS Clinical Reference Handbooks (ed 1): Oxford University Press; 2015.

268. Wiener LS, Pao M, Kazak AE, et al., eds. Pediatric Psycho-Oncology: A quick reference on the psychosocial dimensions of cancer symptom management (ed 2): Oxford University Press; 2015.

269. Legler A, Bradley EH, Carlson MD. The effect of comorbidity burden on health care utilization for patients with cancer using hospice. J Palliat Med 2011;14:751-756. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21548813.

270. Raji MA, Kuo YF, Freeman JL, Goodwin JS. Effect of a dementia diagnosis on survival of older patients after a diagnosis of breast, colon, or prostate cancer: implications for cancer care. Arch Intern Med 2008;168:2033-2040. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18852406.

271. Hopkinson JB, Milton R, King A, Edwards D. People with dementia: what is known about their experience of cancer treatment and cancer treatment outcomes? A systematic review. Psychooncology 2016;25:1137-1146. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27246507.

272. Rainsford S, Rosenberg JP, Bullen T. Delirium in advanced cancer: screening for the incidence on admission to an inpatient hospice unit. J Palliat Med 2014;17:1045-1048. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24921433.

273. Lawlor PG, Gagnon B, Mancini IL, et al. Occurrence, causes, and outcome of delirium in patients with advanced cancer: a prospective study. Arch Intern Med 2000;160:786-794. Available at: http://www.ncbi.nlm.nih.gov/pubmed/10737278.

274. Marcantonio ER, Juarez G, Goldman L, et al. The relationship of postoperative delirium with psychoactive medications. Jama 1994;272:1518-1522. Available at: https://www.ncbi.nlm.nih.gov/pubmed/7966844.

275. Pandharipande P, Shintani A, Peterson J, et al. Lorazepam is an independent risk factor for transitioning to delirium in intensive care unit patients. Anesthesiology 2006;104:21-26. Available at: http://www.ncbi.nlm.nih.gov/pubmed/16394685.

276. Pisani MA, Murphy TE, Araujo KL, et al. Benzodiazepine and opioid use and the duration of intensive care unit delirium in an older population. Crit Care Med 2009;37:177-183. Available at: https://www.ncbi.nlm.nih.gov/pubmed/19050611.

277. Elsayem AF, Bruera E, Valentine AD, et al. Delirium frequency among advanced cancer patients presenting to an emergency department: A prospective, randomized, observational study. Cancer 2016;122:2918-2924. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27455035.

278. Elsayem AF, Bruera E, Valentine A, et al. Advance directives, hospitalization, and survival among advanced cancer patients with delirium presenting to the emergency department: a prospective study. Oncologist 2017. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28765503.

279. de la Cruz M, Fan J, Yennu S, et al. The frequency of missed delirium in patients referred to palliative care in a comprehensive cancer center. Support Care Cancer 2015;23:2427-2433. Available at: http://www.ncbi.nlm.nih.gov/pubmed/25617070.

280. Dy SM, Apostol CC. Evidence-based approaches to other symptoms in advanced cancer. Cancer J 2010;16:507-513. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20890148.

281. Young J, Murthy L, Westby M, et al. Diagnosis, prevention, and management of delirium: summary of NICE guidance. BMJ 2010;341:c3704. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20667955.

282. Breitbart W, Alici Y. Evidence-based treatment of delirium in patients with cancer. J Clin Oncol 2012;30:1206-1214. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22412123.

283. Boyes AW, Girgis A, D'Este CA, et al. Prevalence and predictors of the short-term trajectory of anxiety and depression in the first year after a cancer diagnosis: a population-based longitudinal study. J Clin Oncol 2013;31:2724-2729. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23775970.

284. Krebber AM, Buffart LM, Kleijn G, et al. Prevalence of depression in cancer patients: a meta-analysis of diagnostic interviews and self-report instruments. Psychooncology 2014;23:121-130. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24105788.

285. Walker J, Holm Hansen C, Martin P, et al. Prevalence of depression in adults with cancer: a systematic review. Ann Oncol 2013;24:895-900. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23175625.

286. Caruso R, Nanni MG, Riba M, et al. Depressive spectrum disorders in cancer: prevalence, risk factors and screening for depression: a critical review. Acta Oncol 2017;56:146-155. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28140731.

287. Dinh KT, Reznor G, Muralidhar V, et al. Association of androgen deprivation therapy with depression in localized prostate cancer. J Clin Oncol 2016;34:1905-1912. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27069075.

288. Mehnert A, Brahler E, Faller H, et al. Four-week prevalence of mental disorders in patients with cancer across major tumor entities. J Clin Oncol 2014;32:3540-3546. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25287821.

289. Avis NE, Levine BJ, Case LD, et al. Trajectories of depressive symptoms following breast cancer diagnosis. Cancer Epidemiol Biomarkers Prev 2015;24:1789-1795. Available at: http://www.ncbi.nlm.nih.gov/pubmed/26377192.

290. Kim SA, Roh JL, Lee SA, et al. Pretreatment depression as a prognostic indicator of survival and nutritional status in patients with head and neck cancer. Cancer 2015. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26371775.

291. Kanani R, Davies EA, Hanchett N, Jack RH. The association of mood disorders with breast cancer survival: an investigation of linked cancer registration and hospital admission data for South East England. Psychooncology 2016;25:19-27. Available at: http://www.ncbi.nlm.nih.gov/pubmed/26619290.

292. Barber B, Dergousoff J, Slater L, et al. Depression and survival in patients with head and neck cancer: a systematic review. JAMA Otolaryngol Head Neck Surg 2016;142:284-288. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26796781.

293. Leung YW, Li M, Devins G, et al. Routine screening for suicidal intention in patients with cancer. Psychooncology 2013;22:2537-2545. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23878040.

294. Miller M, Mogun H, Azrael D, et al. Cancer and the risk of suicide in older Americans. J Clin Oncol 2008;26:4720-4724. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18695256.

295. Misono S, Weiss NS, Fann JR, et al. Incidence of suicide in persons with cancer. J Clin Oncol 2008;26:4731-4738. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18695257.

296. Walker J, Waters RA, Murray G, et al. Better off dead: suicidal thoughts in cancer patients. J Clin Oncol 2008;26:4725-4730. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18695258.

297. Kendal W. Suicide and cancer: a gender-comparative study. Annals of Oncology 2007;18:381-387. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17053045.

298. Jayakrishnan TT, Sekigami Y, Rajeev R, et al. Morbidity of curative cancer surgery and suicide risk. Psychooncology 2017;26:1792-1798. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27421798.

299. Gaitanidis A, Alevizakos M, Pitiakoudis M, Wiggins D. Trends in incidence and associated risk factors of suicide mortality among breast cancer patients. Psychooncology 2018;27:1450-1456. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29055289.

300. Oakley C, Hynes F, Clark T. Mood disorders and violence: a new focus. Advances in Psychiatric Treatment 2009;15:263-270. Available at:

301. Carvalho AF, Hyphantis T, Sales PM, et al. Major depressive disorder in breast cancer: a critical systematic review of pharmacological and psychotherapeutic clinical trials. Cancer Treat Rev 2014;40:349-355. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24084477.

302. Dy SM, Lorenz KA, Naeim A, et al. Evidence-based recommendations for cancer fatigue, anorexia, depression, and dyspnea. J Clin Oncol 2008;26:3886-3895. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18688057.

303. Hart SL, Hoyt MA, Diefenbach M, et al. Meta-analysis of efficacy of interventions for elevated depressive symptoms in adults diagnosed with cancer. J Natl Cancer Inst 2012;104:990-1004. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22767203.

304. Laoutidis ZG, Mathiak K. Antidepressants in the treatment of depression/depressive symptoms in cancer patients: a systematic review and meta-analysis. BMC Psychiatry 2013;13:140. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23679841.

305. Piet J, Wurtzen H, Zachariae R. The effect of mindfulness-based therapy on symptoms of anxiety and depression in adult cancer patients and survivors: a systematic review and meta-analysis. J Consult Clin Psychol 2012;80:1007-1020. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22563637.

306. Walker J, Sawhney A, Hansen CH, et al. Treatment of depression in adults with cancer: a systematic review of randomized controlled trials. Psychol Med 2013:1-11. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23778105.

307. Ostuzzi G, Benda L, Costa E, Barbui C. Efficacy and acceptability of antidepressants on the continuum of depressive experiences in patients with cancer: Systematic review and meta-analysis. Cancer Treat Rev 2015;41:714-724. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26118318.

308. Okuyama T, Akechi T, Mackenzie L, Furukawa TA. Psychotherapy for depression among advanced, incurable cancer patients: A systematic review and meta-analysis. Cancer Treat Rev 2017;56:16-27. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28453966.

309. Li M, Kennedy EB, Byrne N, et al. Systematic review and meta-analysis of collaborative care interventions for depression in patients with cancer. Psychooncology 2017;26:573-587. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27643388.

310. Grassi L, Nanni MG, Rodin G, et al. The use of antidepressants in oncology: a review and practical tips for oncologists. Ann Oncol 2017. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29272358.

311. Ostuzzi G, Matcham F, Dauchy S, et al. Antidepressants for the treatment of depression in people with cancer. Cochrane Database Syst Rev 2018;4:CD011006. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29683474.

312. Sullivan DR, Mongoue-Tchokote S, Mori M, et al. Randomized, double-blind, placebo-controlled study of methylphenidate for the treatment of depression in SSRI-treated cancer patients receiving palliative care. Psychooncology 2017;26:1763-1769. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27429350.

313. Li M, Fitzgerald P, Rodin G. Evidence-based treatment of depression in patients with cancer. J Clin Oncol 2012;30:1187-1196. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22412144.

314. Fink M. Convulsive therapy in delusional disorders. Psychiatr Clin North Am 1995;18:393-406. Available at: http://www.ncbi.nlm.nih.gov/pubmed/7659606.

315. Gazdag G, Ungvari GS. Non-pharmacological biological therapies in schizophrenia. Neuropsychopharmacol Hung 2011;13:233-238. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22184192.

316. Greenhalgh J, Knight C, Hind D, et al. Clinical and cost-effectiveness of electroconvulsive therapy for depressive illness, schizophrenia, catatonia and mania: systematic reviews and economic modelling studies. Health Technol Assess 2005;9:1-156, iii-iv. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15774232.

317. Tharyan P, Adams CE. Electroconvulsive therapy for schizophrenia. Cochrane Database Syst Rev 2005:CD000076. Available at: http://www.ncbi.nlm.nih.gov/pubmed/15846598.

318. Zervas IM, Theleritis C, Soldatos CR. Using ECT in schizophrenia: a review from a clinical perspective. World J Biol Psychiatry 2012;13:96-105. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21486108.

319. Beale MD, Kellner CH, Parsons PJ. ECT for the treatment of mood disorders in cancer patients. Convuls Ther 1997;13:222-226. Available at: http://www.ncbi.nlm.nih.gov/pubmed/9437566.

320. Kaestner F, Mostert C, Behnken A, et al. Therapeutic strategies for catatonia in paraneoplastic encephalitis. World J Biol Psychiatry 2008;9:236-240. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17853266.

321. Kohler CG, Burock M. ECT for psychotic depression associated with a brain tumor. Am J Psychiatry 2001;158:2089. Available at: http://www.ncbi.nlm.nih.gov/pubmed/11729041.

322. McKinney PA, Beale MD, Kellner CH. Electroconvulsive therapy in a patient with a cerebellar meningioma. J ECT 1998;14:49-52. Available at: http://www.ncbi.nlm.nih.gov/pubmed/9661094.

323. Sutor B, Wells LA, Rummans TA. Steroid-induced depressive psychosis responsive to electroconvulsive therapy. Convuls Ther 1996;12:104-107. Available at: http://www.ncbi.nlm.nih.gov/pubmed/8744170.

324. Andersen BL, DeRubeis RJ, Berman BS, et al. Screening, assessment, and care of anxiety and depressive symptoms in adults with cancer: an american society of clinical oncology guideline adaptation. J Clin Oncol 2014;32:1605-1619. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24733793.

325. Kenna HA, Poon AW, de los Angeles CP, Koran LM. Psychiatric complications of treatment with corticosteroids: review with case report. Psychiatry Clin Neurosci 2011;65:549-560. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22003987.

326. Sirois F. Steroid psychosis: a review. Gen Hosp Psychiatry 2003;25:27-33. Available at: http://www.ncbi.nlm.nih.gov/pubmed/12583925.

327. Stark D, Kiely M, Smith A, et al. Anxiety disorders in cancer patients: their nature, associations, and relation to quality of life. J Clin Oncol 2002;20:3137-3148. Available at: http://www.ncbi.nlm.nih.gov/pubmed/12118028.

328. Rasic DT, Belik SL, Bolton JM, et al. Cancer, mental disorders, suicidal ideation and attempts in a large community sample. Psychooncology 2008;17:660-667. Available at: https://www.ncbi.nlm.nih.gov/pubmed/18050260.

329. Traeger L, Greer JA, Fernandez-Robles C, et al. Evidence-based treatment of anxiety in patients with cancer. J Clin Oncol 2012;30:1197-1205. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22412135.

330. Ford JS, Chou JF, Sklar CA, et al. Psychosocial Outcomes in Adult Survivors of Retinoblastoma. J Clin Oncol 2015;33:3608-3614. Available at: http://www.ncbi.nlm.nih.gov/pubmed/26417002.

331. Chan CMH, Ng CG, Taib NA, et al. Course and predictors of post-traumatic stress disorder in a cohort of psychologically distressed patients with cancer: A 4-year follow-up study. Cancer 2018;124:406-416. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29152719.

332. Abbey G, Thompson SB, Hickish T, Heathcote D. A meta-analysis of prevalence rates and moderating factors for cancer-related post-traumatic stress disorder. Psychooncology 2015;24:371-381. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25146298.

333. Cordova MJ, Riba MB, Spiegel D. Post-traumatic stress disorder and cancer. Lancet Psychiatry 2017;4:330-338. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28109647.

334. Goebel S, Strenge H, Mehdorn HM. Acute stress in patients with brain cancer during primary care. Support Care Cancer 2012;20:1425-1434. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21717272.

335. Kangas M, Henry JL, Bryant RA. Correlates of acute stress disorder in cancer patients. J Trauma Stress 2007;20:325-334. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17598136.

336. Rodin G, Deckert A, Tong E, et al. Traumatic stress in patients with acute leukemia: A prospective cohort study. Psychooncology 2018;27:515-523. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28665521.

337. Magill M, Ray LA. Cognitive-behavioral treatment with adult alcohol and illicit drug users: a meta-analysis of randomized controlled trials. J Stud Alcohol Drugs 2009;70:516-527. Available at: http://www.ncbi.nlm.nih.gov/pubmed/19515291.

338. Meyer F, Block S. Personality disorders in the oncology setting. J Support Oncol 2011;9:44-51. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21542408.

339. Skinner EA, Edge K, Altman J, Sherwood H. Searching for the structure of coping: a review and critique of category systems for classifying ways of coping. Psychol Bull 2003;129:216-269. Available at: https://www.ncbi.nlm.nih.gov/pubmed/12696840.

340. Salsman JM, Pustejovsky JE, Jim HS, et al. A meta-analytic approach to examining the correlation between religion/spirituality and mental health in cancer. Cancer 2015;121:3769-3778. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26258536.

341. Li S, Stampfer MJ, Williams DR, VanderWeele TJ. Association of Religious Service Attendance With Mortality Among Women. JAMA Intern Med 2016;176:777-785. Available at: http://www.ncbi.nlm.nih.gov/pubmed/27183175.

342. Vallurupalli M, Lauderdale K, Balboni MJ, et al. The role of spirituality and religious coping in the quality of life of patients with advanced cancer receiving palliative radiation therapy. J Support Oncol 2012;10:81-87. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22088828.

343. Balboni TA, Vanderwerker LC, Block SD, et al. Religiousness and spiritual support among advanced cancer patients and associations with end-of-life treatment preferences and quality of life. J Clin Oncol 2007;25:555-560. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17290065.

344. Astrow AB, Wexler A, Texeira K, et al. Is failure to meet spiritual needs associated with cancer patients' perceptions of quality of care and their satisfaction with care? J Clin Oncol 2007;25:5753-5757. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18089871.

345. Phelps AC, Lauderdale KE, Alcorn S, et al. Addressing spirituality within the care of patients at the end of life: perspectives of patients with advanced cancer, oncologists, and oncology nurses. J Clin Oncol 2012;30:2538-2544. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22614979.

346. Balboni MJ, Sullivan A, Amobi A, et al. Why is spiritual care infrequent at the end of life? Spiritual care perceptions among patients, nurses, and physicians and the role of training. J Clin Oncol 2013;31:461-467. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23248245.

347. Mesquita AC, Chaves ECL, Barros GAM. Spiritual needs of patients with cancer in palliative care: an integrative review. Curr Opin Support Palliat Care 2017;11:334-340. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28922295.

348. Kruizinga R, Hartog ID, Jacobs M, et al. The effect of spiritual interventions addressing existential themes using a narrative approach on quality of life of cancer patients: a systematic review and meta-analysis. Psychooncology 2016;25:253-265. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26257308.

349. Bauereiss N, Obermaier S, Ozunal SE, Baumeister H. Effects of existential interventions on spiritual, psychological, and physical well-being in adult patients with cancer: Systematic review and meta-analysis of randomized controlled trials. Psychooncology 2018;27:2531-2545. Available at: https://www.ncbi.nlm.nih.gov/pubmed/29958339.

350. Exline JJ, Pargament KI, Grubbs JB, Yali AM. The Religious and Spiritual Struggles Scale: development and initial validation. Psychology of Religion and Spirituality 2014;6:208-222. Available at: http://psycnet.apa.org/record/2014-30104-002.

351. Lo C, Panday T, Zeppieri J, et al. Preliminary psychometrics of the Existential Distress Scale in patients with advanced cancer. Eur J Cancer Care (Engl) 2017;26. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27778415.

352. Puchalski C, Ferrell B, Virani R, et al. Improving the quality of spiritual care as a dimension of palliative care: the report of the Consensus Conference. J Palliat Med 2009;12:885-904. Available at: http://www.ncbi.nlm.nih.gov/pubmed/19807235.

353. Shanafelt T, Dyrbye L. Oncologist burnout: causes, consequences, and responses. J Clin Oncol 2012;30:1235-1241. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22412138.

354. Shanafelt TD, Gradishar WJ, Kosty M, et al. Burnout and career satisfaction among US oncologists. J Clin Oncol 2014;32:678-686. Available at: http://www.ncbi.nlm.nih.gov/pubmed/24470006.

355. Rath KS, Huffman LB, Phillips GS, et al. Burnout and associated factors among members of the Society of Gynecologic Oncology. Am J Obstet Gynecol 2015;213:824.e821-829. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26226551.

356. Medisauskaite A, Kamau C. Prevalence of oncologists in distress: systematic review and meta-analysis. Psychooncology 2017;26:1732-1740. Available at: https://www.ncbi.nlm.nih.gov/pubmed/28116833.

357. Sanchez-Reilly S, Morrison LJ, Carey E, et al. Caring for oneself to care for others: physicians and their self-care. J Support Oncol 2013;11:75-81. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23967495.

358. Jacobsen PB, Wagner LI. A new quality standard: the integration of psychosocial care into routine cancer care. J Clin Oncol 2012;30:1154-1159. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22412134.

359. Jacobsen PB, Holland JC, Steensma DP. Caring for the whole patient: the science of psychosocial care. J Clin Oncol 2012;30:1151-1153. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22412125.

360. Stanton AL. What happens now? Psychosocial care for cancer survivors after medical treatment completion. J Clin Oncol 2012;30:1215-1220. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22412133.

361. Zebrack B, Isaacson S. Psychosocial care of adolescent and young adult patients with cancer and survivors. J Clin Oncol 2012;30:1221-1226. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22412147.

362. Northouse L, Williams AL, Given B, McCorkle R. Psychosocial care for family caregivers of patients with cancer. J Clin Oncol 2012;30:1227-1234. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22412124.