Topic Brief: Psychosocial Screening Oncology

Date: 8/4/2020
Nomination Number: 0906

Purpose: This document summarizes the information addressing a nomination submitted on 5/4/2020 through the Effective Health Care Website. This information was used to inform the Evidence-based Practice Center (EPC) Program decisions about whether to produce an evidence report on the topic, and if so, what type of evidence report would be most suitable.

Issue: In 2015, the American College of Surgeons Commission on Cancer (ACSCC) began requiring cancer centers to conduct distress screening with oncology patients. The best approach to implementation of distress screening programs is unclear.

Program Decision:
The EPC Program will not develop a new synthesis product. The nomination was a request for an evidence review of the effectiveness of distress screening in oncology and the evidence regarding implementation parameters, however, further discussion with the nominator made it apparent that a synthesis of evidence on implementation of distress screening is likely not an approach that would best inform implementation. To address the nominator's request for a product that would provide information to accommodate a more tailored approach to implementation of distress screening in oncology, we created tables (Related Resources, Tables 1-3) of publications pertaining to implementation information that includes characteristics of the health systems, along with implementation features and outcomes.

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Background

Distress in cancer is defined by the National Comprehensive Cancer Network as "a multifactorial unpleasant experience of a psychological (e.g., 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…"[1] Between 35 and 55 percent of people with cancer experience distress.[2]

In 2015, ACSCC initiated an accreditation requirement that cancer centers implement psychosocial distress screening programs for psychosocial distress.[3] The 2020 ACSCC standards for cancer care guidelines state that psychosocial services should be:
- available on site or by referral and
- the ACSCC committee monitors screening and referral each year,
- that screening should be conducted at least one time during the patient's first course of treatment,
- that screening tools should ideally be validated instruments or tools with established clinical cutoffs,
- that, if distress is identified, a member of the patient's oncology team must assess problems initiating the distress, and
- that screening and follow-up should be documented in the patient medical records.[4]

While the requirement for distress screening remains and the ACSCC provides guidance on components of the screening process, evidence on effective implementation practices is less clear. A 2019 Cochrane systematic review on psychosocial well-being and the care needs of people with cancer reports that studies of screening implementation are considerably varied. The review identifies no patterns between intervention characteristics and effectiveness of screening interventions.[5]

Nomination Summary

The nomination was a request for an evidence review of the effectiveness of distress screening in oncology and the evidence regarding implementation parameters, such as frequency of screening. A Cochrane systematic review examining the effectiveness and safety of distress screening and evaluating intervention characteristics that contribute to effectiveness of the screening interventions was identified.[5] During a discussion with the nominators, it was made apparent that a synthesis of evidence on implementation of distress screening, such as was done in the 2019 Cochrane review, was not an approach that would best inform implementation. Rather, the nominators expressed that implementation would be best accomplished by tailoring implementation practices to the individual health systems' needs. In response, we compiled information about implementation strategies and recommendations from implementers to serve as a reference when health systems are considering how they might approach implementation (Related Resources, Tables 1-3). See Appendix A for a description of methods.

Related Resources

This section includes Tables 1-3, which present relevant data from studies and accounts of the implementation of distress screening in oncology published in the last 5 years. Table 1 includes articles that present recommendations for oncology screening implementation. Table 2 includes studies of the Screening for Psychosocial Distress Program (SPDP), a 2-year Canadian training program to assist clinicians in implementing routine distress screening. Table 3 includes studies in which distress screening was implemented. These tables are intended to provide the nominators with additional information and context with regards to the existing literature.

Table 1. Articles presenting recommendations for implementation of oncology distress screening

Author, Year Title	Setting/Health System/Patient Characteristics	Recommendations for Screening Implementation
Williams, 2017[7] Psychosocial Distress and Distress Screening in Multidisciplinary Head and Neck Cancer Treatment	Head and neck cancer patients	• Indicates DT as most widely used, also HADS, BIS-18 • Establish multidisciplinary cancer committee- all disciplines, including head and neck cancer physician and psychosocial representation. • Screening- use a validated distress measure assessing two or more areas of distress, and include a depression measure; and should be initiated at one or more medical visits that are higher risk for distress (e.g., initial or second visit, time of diagnosis, beginning or ending treatment, changes in treatment modality, changes in disease status, transitioning to palliative care). • Follow-up assessment/evaluation- establish algorithm for distress screening follow-up (use established distress cutoff scores, follow-up with validated depression and anxiety measures/clinical interview). • Referral/treatment and follow-up- referral for psychosocial intervention; follow-up with patient, oncology team, and family. • Documentation of distress screening results, further assessment, referrals/follow-up. • Use also for quality assurance/research.
Smith, 2018[9] Best Practices in Oncology Distress Management: Beyond the Screen	NR	• Establish shared values between implementation program staff and stakeholders, identify perceived benefits, and relevant outcomes from the perspectives of key stakeholders, and gathered information from sources who know the key stakeholders. • All patients should receive information and basic emotional support through effective communication, empathy, and patient education provided by the oncology clinicians. If screening scores are high, a referral may be needed. • Review screening scores with the patient. Engage the patient in prioritizing areas of need. • Programs should have a suicide protocol in place. • Provide ongoing support for clinicians through academic detailing, case presentations, and didactic presentations followed by group discussions. • Oncology clinicians introduce self-management approaches (potentially with aids such as mobile technologies) to equip patients to be more active participants in their care.
Girgis, 2018[10] Screening for distress in survivorship	Cancer survivors	• DT, commonly administered with the 39-item problem list (4 out of 10 is current cut-off score for identifying clinical levels of distress). • Have local champions to ensure smooth transition and management in the cancer centers. • Provide comprehensive education and staff training programs prior to implementation. • Ensure buy-in and involvement of senior leaders for sustainability. • Engage clinical staff early in development of a model of care to provide guidance on existing referral pathways. • Develop algorithms and guidelines to support patient assessment and clinical decision-making. • Invest resources at the system level to ensure adequate staffing, strategic and business plan development, and to support electronic capture and integration into medical records.

Abbreviations: BSI-18=brief symptom inventory 18; DT=distress thermometer; HADS=hospital anxiety and depression scale; NR=not reported.

Table 2. Lessons/recommendations from studies of the Screening for Psychosocial Distress Program (SPDP), a 2-year Canadian Program to assist clinicians in implementing routine distress screening.

SPDP description:
- Cancer care clinicians (dyads) from 18 institutions participated in the training. 11 of the dyads were from institutions identified as NCI Designated/Comprehensive Cancer Center; the remaining 7 identified as community/general hospitals. Institution sizes ranged from 263 to 13,683 patients per year, with a median size of 3,300 patients /year (Median = 4,716.66, SD = 4,343.37).
- Participants' disciplines were social work (58%), nursing (25%), psychiatry/psychology (14%), and other (3%).
- Training was delivered to dyads during in-person workshops delivered by psychosocial oncology leaders. 2 in-person 8-hour workshops held 12 months apart, and 6 support-oriented calls during first year and 4 calls in second year.
- Data collected on dyad's progress on implementation using an investigator-developed Goal Evaluation Form at 6, 12, and 24 months after baseline.

Author, Year Title	Results/Lessons learned from the SPDP program
Ercolano, 2018[15] Managing Psychosocial Distress: Lessons Learned in Optimizing Screening Program Implementation	- Get buy-in from key stakeholders (administration (early engagement needed as they are involved in finances and policy), clinical staff, quality department, information technology, etc.). - Form clinician dyads to distribute organizational tasks, share a common goal, influence institutional communication and work. - Form an oncology interdisciplinary group (social work, nursing, oncologists, psychologists, etc.) to set, direct, and evaluate distress screening policy and program objectives. - Develop a distress screening policy that documents the overall purpose, scope, rationale, procedures, and evaluation criteria for auditing and monitoring compliance of screening. - Introduce staff training early in developing the program and have a consistent/structured training program for existing and new employees. - Cancer clinicians should have a resource list of names of psychiatrists, psychologist, pastoral care, etc., both within and outside the health care system for referrals for distress. Patients are encouraged to reestablish relationships with any previous therapists. - Document all steps of the screening process in the electronic health record, if possible.
Lazenby, 2018[16] Psychosocial Distress Screening: An Educational Program's Impact on Participants' Goals for Screening Implementation in Routine Cancer Care	All 18 dyads adopted a standardized tool and a method for evaluating patients who reported clinically significant distress. 15 dyads developed a policy on screening; 10 dyads formed psychosocial committees to guide ongoing implementation of their screening programs. All dyads established a network of providers of psychosocial healthcare services within their respective organizations. 17 dyads incorporated a documentation of screening into patient health records. Dyads reported that they worked well together and had the support of management and that their goals aligned with those of management.

Author, Year Title	Results/Lessons learned from the SPDP program
Knies, 2019[17] Barriers and facilitators to implementing the commission on cancer's distress screening program standard	Most common goals were "stakeholder buy-in," establishing a "referral network," and starting "brief screening." 94.8% of goals were accomplished by 24 months. The uncompleted goals at 24 months, "referral network" (creating a list of current psychosocial programs, including services provided by behavioral health department) and "piloting and beginning" (pilot of distress screening process in 4 clinics) were in process. "Stakeholder buy-in" (engage stakeholder to complete current state assessment) goal was canceled. *Barriers:* Top barriers were "lack of staff" (n=15), "staff turnover" (n=11), competing demands (n=11), and "screening process mechanics" (selection, utility/validity of screening tool, and documentation of screening activities) (n=7). *Facilitators*: • "Buy-in," "institution support," and "dyad viewed as knowledgeable and a resource" • Conference calls and interactions among peers from other institutions were instrumental in meeting goals.

Table 3. Information on oncology distress screening implementation extracted from individual studies in which oncology distress screening was implemented.

Author, Year Title	Setting/Health System/Patient Characteristics	Methods for the implementation of the screening program (e.g., program features such as staff training), screening, and follow-up	Screening Tool(s) Used	Outcome/Findings
Dessai, 2015[18] Pilot study of single-day distress screening with the NCCN distress thermometer to evaluate the feasibility of routine distress screening in tertiary cancer center in rural India	Single day pilot distress screening procedure in all patient attending the outpatient clinic in a rural cancer center in the non-developed northern Malabar region of Kerala in India.	Screening took place during the appointment period with the physician. The word 'distress' was translated and indicated on the DT. Physicians and nursing assistants translated the items of the problem list individually for each of the patients whose DT score was >4. Patients with a score of 4 or more were referred for psychological evaluation and counselling in a general hospital within 6 kilometers of the center and were counseled there by a single psychiatrist.	DT with problem list	The DT was well accepted by patients, none of the patients declined to fill it out, and most patients verbally indicated that they liked filling it out. The doctor-patient ratio was 1:43, the nurse-patient ratio was 1:83, and the nursing assistant-patient ratio was 1:34. The average time to complete the problem list was 5 minutes. The extra time to complete the screening resulted in 15% of patients being seen after hours.
Thalen-Lindstrom, 2016[19] Identification of Distress in Oncology Patients. A Comparison of the Hospital Anxiety and Depression Scale and a Thorough Clinical Assessment	A clinical oncology department at a university hospital in Sweden. Patients with diverse cancer diagnoses and treatments, most commonly prostate, gastrointestinal, and breast cancer, and received most commonly radiotherapy or chemotherapy.	Clinical assessment conducted by a registered nurse and a social worker, both with experience working with oncology patients and with degrees in cognitive behavioral therapy. Scheduled for 60 minutes and conducted in a private room in the oncology department. Patients judged to be anxious, depressed, or distressed during the session were referred to support and treatment. A leaflet with information about where and who to contact for support later was provided to all patients. The assessment was recorded in the patient's medical record. The study team categorized patients as non-cases, doubtful cases, or cases.	HADS	Agreement between the HADS and clinical assessment was good for women and fair for men. Accuracy for depression and distress were good. *Patient evaluation*: The majority of patients reported that their problems and needs were entirely or partly brought up for discussion during the assessment. Most discussed topics were worry, treatment by healthcare staff, and depressed mood.

Author, Year Title	Setting/Health System/Patient Characteristics	Methods for the implementation of the screening program (e.g., program features such as staff training), screening, and follow-up	Screening Tool(s) Used	Outcome/Findings
Biddle, 2016[6] Patients' and clinicians' experiences of holistic needs assessment using a cancer distress thermometer and problem list: A qualitative study	Outpatient chemotherapy or radiotherapy at two sites in southwest England October 2009-February 2011.	*Training and Staff Resources:* Staff delivering the screening tool had attended a training and were given a resource directory on each problem, on possible self-management techniques and on support groups. *Screening delivery:* Screening conducted during face-to-face meetings with a radiotherapist or chemotherapy nurse at second week of radiotherapy or second cycle of chemotherapy. *Follow-up to screening:* An action plan was developed: immediate staff actions (e.g., provide information), patient actions (e.g., using self-help resources), referral (e.g., psychological counselling).	DT (Patients rated their distress on a 0 to 10 visual analogue scale) and problem list (the patient completed a problem list of physical, practical, family, emotional, and spiritual concerns.) . Tool administration time: less than 15 minutes to over an hour.	*Benefits:* Clinicians felt the screening tool was 'powerful' *Barriers to effectiveness:* Clinicians were confident about dealing with physical distress, but clinicians and patients were uncertain about clinicians' ability to respond to psychosocial issues, including when and how to refer. Few clinicians did not feel that they were unfit for the role and one had pre-existing counselling training. Patients interpreted 'distress' as only extreme difficulties, and often defined themselves as 'low need,' or hesitated to report emotional distress for fear of consequences (e.g., medications). Additional barriers include limited privacy (no private room and/or being accompanied), interruptions, limited time, patients feeling too unwell, and no pre-existing relationship between patient and clinician. *Patient/provider recommendations:* • Patients requested that providers don't overwhelm them with screening too early in the treatment process • Clinicians and patients identified mid- treatment as optimum time for needs assessment, and that it should be completed more than once, but clinicians did not think time would allow. • Patients identified the importance of follow-up, particularly for patient raised issue; lack of follow-up was also concerning for clinicians.

Author, Year Title	Setting/Health System/Patient Characteristics	Methods for the implementation of the screening program (e.g., program features such as staff training), screening, and follow-up	Screening Tool(s) Used	Outcome/Findings
Bergerot, 2016[20] Development and implementation of a comprehensive psychosocial screening program in a Brazilian cancer center	Centro de Cancer de Brasilia, a private multidisciplinary cancer center, located in Brazil's Federal District serving patients with health insurance, who generally come from high socioeconomic backgrounds and have high literacy levels. Participants were all new patients starting first line of treatment.	At initial screening, a 10-minute semi-structured interview was conducted during the chemotherapy infusion procedure. Patients completed a 20-minute assessment packet (DT, HADS) at the mid and end-points of treatment during chemotherapy infusions. In the second phase, a psychosocial meeting group was added. Physicians met with an interdisciplinary team every 2 months to discuss each patient's psychosocial needs. A health-related QOL measure was also added. Patients with DT ≥ 4, were provided appropriate treatment or referral. For DT≤ 3, educational material, emotional support and referrals were offered.	DT, HADS, FACT-G;	Patients for whom psychosocial care meetings were conducted had lower distress (DT) ($p<0.001$) and total anxiety/depression HADS than patients receiving distress screening alone ($p<0.001$).
Funk, 2016[21] What happens after distress screening? Patterns of supportive care service utilization among oncology patients identified through a systematic screening protocol	Adult patients receiving care through the ambulatory medical and surgical oncology clinics of an NCI-designated cancer center.	Tracked identification of positive distress screens, referral to supportive care team members, and uptake of supportive care services. Patients with concerns about anxiety and depression were referred to the supportive care team; appetite and weight loss to dietary staff; and insurance, family, or children to social work staff. Patients with high scores and/or requests for consultation in multiple domains were contacted by multiple specialty team members. Distressed patients who had indicated that they wanted to be contacted if needed were contacted via telephone, in-person consult, or electronic medical record secure patient portal by appropriate supportive care staff.	Modified ESAS (paper and pencil version)	*Barriers*: Service-related barriers- limited patient reporting 8% screeners returned blank), 17% of patients who had high scores on the distress measure opted out of supportive care prior to implementation of distress measures.

Author, Year Title	Setting/Health System/Patient Characteristics	Methods for the implementation of the screening program (e.g., program features such as staff training), screening, and follow-up	Screening Tool(s) Used	Outcome/Findings
Recklitis, 2016[22] Screening young adult cancer survivors for distress with the Distress Thermometer: Comparisons with a structured clinical diagnostic interview	Young adult cancer survivors at a cancer center in six disease centers (pediatric oncology, breast oncology, hematological oncology, genitourinary oncology, adult neuro-oncology, sarcoma clinic) and long-term follow-up clinics (pediatric survivorship clinic, pediatric neuro-outcomes clinic, adult survivorship clinic, education program for young breast cancer patients). Pediatric cancer survivors 18-40 years old.	All measures completed during a single visit	DT, SCID	The recommended DT cut-off score of ≥ 5 failed to identify 31.81% of survivors with a SCID diagnosis and 32.81% of survivors with either Significant SCID symptoms or a SCID diagnosis.

Author, Year Title	Setting/Health System/Patient Characteristics	Methods for the implementation of the screening program (e.g., program features such as staff training), screening, and follow-up	Screening Tool(s) Used	Outcome/Findings
Geerse, 2017[23] Structural distress screening and supportive care for patients with lung cancer on systemic therapy: A randomised controlled trial	Patients diagnosed in the University Medical Center Groningen with newly diagnosed (stage Ib to IV) or recurrent lung cancer starting either chemotherapy, adjuvant chemotherapy, chemo-radiotherapy or treatment with biologicals.	All patients completed QOL questionnaires (EORTC-QLQ-C30; EORTC-LC13; EQ-5D, HADS, and PSQ-III) at home at four time points coinciding with scheduled outpatient visits: 1, 7, 13, and 25 weeks. QOL was assessed at 25 weeks. *Experimental group*: Completed the DT and Problems List before scheduled outpatient clinic appointments at 1, 7, 13, and 25 weeks. After completion of the screening, patients met face-to-face with a psychosocial nurse to discuss their response pattern. They were offered referral to an appropriate and licensed healthcare professional if the DT score was ≥ 4 or if the patient answered 'yes' to the question offering referral. All patients were offered a minimum of four meetings with a psychosocial nurse and allowed to schedule additional meetings when requested. *Control group*: Medical and psychosocial care provided by treating physician every 3 weeks. Referral to appropriate healthcare professionals was performed by the treating physician based on clinical judgement. Additional care was scheduled ad hoc, and there was no structural screening of distress. Oncology or research nurses were not involved unless requested by the treating physician.	DT, Problems List	50% of patients completed all four assessments. No difference in QOL or other patient-reported outcomes between group receiving structured implementation of distress screening (i.e., DT at scheduled intervals), referral, and additional psychosocial support (experimental group) versus treatment as usual (control group).

Author, Year Title	Setting/Health System/Patient Characteristics	Methods for the implementation of the screening program (e.g., program features such as staff training), screening, and follow-up	Screening Tool(s) Used	Outcome/Findings
Hahn, 2017[24] Feasibility of psychosocial distress screening and management program for hospitalized cancer patients	Inpatients with diagnosis of cancer at the Seoul St. Mary's Hospital, Seoul, Republic of Korea in their first admission for cancer treatment.	Oncology nurses or oncologists helped participants complete the DT. If DT score was >4, oncology nurses or oncologists helped participants complete the HADS. Patients with a HADS score >13 were referred to psychiatric consultation services (psychiatric interviewing, diagnosis, and treatment plan by psychiatrist). Patients with DT score <4 were referred to a distress education program (education by oncologic nurses about psychological distress and coping methods). Patients with HADS score <13 were referred to the distress management program (psychotherapy three times by trained psychiatric nurses).	DT (validated Korean version), HADS	A total of 89% agreed to finish the primary distress screening with DT.54% who had DT scores <4 received distress education 45% who had DT scores >4 received secondary distress screening through HADS, Among the 114 (50%) patients with high scores (>13) in secondary distress screening (HADS), 33% received psychiatric consultation and 67% refused psychiatric consultation. Refusal of psychiatric consultation service was associated with cancer type, metastasis, and reason to admission. A higher percentage of residents of urban than rural areas had a high DT score (83.4% vs. 16.6%; p=0.005). A phased approach, with primary (DT) and secondary (HADS) screening was indicated to be feasible.
Ghazali, 2017[25] Screening for distress using the distress thermometer and the University of Washington Quality of Life in post-treatment head and neck cancer survivors	Patients from outpatient clinic with four participating head and neck cancer surgery consultants (oral and maxillofacial, and otolaryngology). Patients had cancer treatment for at least 6 weeks, did not have active/recurrent disease, and were not at the pre-treatment or palliative stages of survivorship.	Patients completed the screening tools pre-consultation.	DT; University of Washington QOL	DT was reasonable for screening for distress in head/neck cancer patients. A cut-off score of ≥4 identified those with significant distress.

Author, Year Title	Setting/Health System/Patient Characteristics	Methods for the implementation of the screening program (e.g., program features such as staff training), screening, and follow-up	Screening Tool(s) Used	Outcome/Findings
Groff, 2017[8] Examining the sustainability of screening for distress, the sixth vital sign, in two outpatient oncology clinics: A mixed-methods study	Screening for distress programs in head and neck and neuro-oncology clinics in Canada.	Examined sustainability of screening for distress programs beyond initial implementation. At the end of the implementation phase, the responsibility of the program was transferred from the program coordinator to the clinic staff. Sustainability was assessed after 6 months. Completed screening questionnaires in the waiting room prior to appointment at initial and follow-up visits. Began with paper and pencil, then shifted to electronic. The nurse worked with patients to prioritize concerns and initiated appropriate assessments and interventions. Staff members were trained to worked with patients to prioritize concerns and further assess and intervene with those concerns most meaningful to patients.	ESAS, CPC	Clinical staff (nurses, oncologists, etc.) described screening for distress as a "routine" practice, and as "fully integrated." They reported that the impact of the removal of the implementation staff was minimal as screening was "entrenched before they left." None of the staff indicated that screening was not being implemented. *Themes that influenced the sustainability of the program*: • Attitudes, knowledge, and beliefs: Participants held positive attitudes and beliefs about the screening. Participants identified gaps in knowledge including knowing how to manage diverse patient populations and respond to certain concerns. Participants also identified a lack of clarity regarding the physician's role. • Outcome expectancy of providers: Participants reported that screening positively impacted patients; helped participants engage with patients and encourage them to communicate their concerns; and provided a common language. • Implementation approach: Participants reported dedicated staff and sufficient buy-in, but insufficient educational support at the onset of implementation. The phased approach was reported to be flexible, but challenging when staff not trained on the screening were covering clinics where screening was utilized. • Integration with existing practices: Participants felt that screening could be better integrated with existing forms and could be better integrated with electronic medical records. Participants indicated the need to incorporate screening into staff education (and into rounds) and maintain community resource lists. • Factors external to the program: Reported challenges were competing priorities and commitment of senior leadership.

Author, Year Title	Setting/Health System/Patient Characteristics	Methods for the implementation of the screening program (e.g., program features such as staff training), screening, and follow-up	Screening Tool(s) Used	Outcome/Findings
Fitch, 2018[11] Reflections on the implementation of screening for distress (sixth vital sign) in Canada: key lessons learned	Comprehensive cancer treatment facilities in Canada	Phased approach: selected a disease site group or clinic, then gradually expanded implementation (per guidelines below) across the institution. *Implementation guidance used:* Implementation guide[12] Clinical practice guidelines[13]	ESAS and the CPC	*Barriers:* Screening was perceived to take additional time from clinicians' routines. Clinicians concerned about identifying needs that could not be attended to. Screening should be documented electronically, but this requires investments in technology. Staff absences/changes interfered with the implementation process. *Recommendations for successful implementation:* • Perception that the program fits with strategic aim • Have necessary resources, including accessible, user-friendly systems and tools • A well-planned implementation process (project management, identification of resources, supports for referral (link with community personnel)) and stable, pre-existing implementation team • Existing champions within the organization • National leadership and endorsement, financial assistance, resource provision, and other materials necessary for quality implementation
Tonsing, 2018[26] Assessing psychological distress in cancer patients: The use of distress thermometer in an outpatient cancer/hematology treatment center	Patients receiving treatment at an outpatient regional cancer/hematology treatment center in central California in May 2014.	Screening was conducted by the social worker employed at the cancer treatment center. Patients were provided referrals on the same day of the appointment for counselling, cancer education, in-home support services, health insurance and advocacy, and family caregiver support.	DT	N/A

Author, Year Title	Setting/Health System/Patient Characteristics	Methods for the implementation of the screening program (e.g., program features such as staff training), screening, and follow-up	Screening Tool(s) Used	Outcome/Findings
Ploos van Amstel, 2019[27] Does a regular nurse-led distress screening and discussion improve quality of life of breast cancer patients treated with curative intent? A randomized controlled trial	Women diagnosed with breast cancer at a university medical center in the Netherlands.	Screening was conducted at baseline and after surgery and/or (neo) adjuvant chemotherapy, and/or radiotherapy, then every 3 months during follow-up visits in the first year, and every 6 months during the second year of follow-up. If a patient scored ≥5 on the DT, the nurse had a focused conversation on problems indicated by the patient. If the score was <5, the nurse verified with the patient that she did not feel distressed. All patients with a score of ≥5 or who had requested additional support were discussed during a multidisciplinary team meeting.	DT	Most patients indicated that the conversation with the nurse was sufficient and did not wish to receive a referral to psycho-oncology services; 25% of patients received a referral to psycho-oncology services that included a psychologist, social worker, and sexologist.
Rajeshwari, 2020[28] Assessment of distress among patients and primary caregivers: Findings from a chemotherapy outpatient unit	Tertiary cancer hospital in Bengaluru, Karnataka, India. Outpatient daycare unit administering chemotherapy and other procedures. Chemotherapy takes 3-6 hours. Accompanying caregiver can sit next to the patient or wait in the waiting area. Between February and April 2018.	Self-administered tool. Those with a score of ≥4 were encouraged to engaging in individual session with the psycho-oncology professional.	DT and problem checklist translated, face validated, and back-translated to Kannada, Tamil, and Hindi (local South Indian languages).	Screening took 3-5 minutes The majority of patients (85.2%) and caregivers (80.1%) indicated interest in psycho-oncology services to manage distress.
LaRocca, 2020[29] The impact of financial toxicity in gastrointestinal cancer patients	Gastrointestinal cancer patients at a gastrointestinal cancer center, City of Hope National Medical Center (Duarte, California). Member of NCCN and an NCI Comprehensive Cancer Center. 2009 to 2015	Screened at first point of contact with either a medical or surgical oncology physician at the center. Any responses or ≥3 indicative of distress. Those with distress were offered additional support/counseling with written information to in-person intervention provided by social workers and supportive care team members.	Support Screen-Electronic distress screening tool developed at City of Hope	Income served as a protective factor against distress. "Feeling anxious" had an odds ratio of 0.8 (CI: 0.54-1.19, P=0.28) at the $40,000 to $100,000 income level, but at the highest income level (>$100,000), the OR decreased to 0.44 (CI: 0.26-0.73, P < .01).

Author, Year Title	Setting/Health System/Patient Characteristics	Methods for the implementation of the screening program (e.g., program features such as staff training), screening, and follow-up	Screening Tool(s) Used	Outcome/Findings
Gotz, 2020[30] Adherence to the distress screening through oncology nurses and integration of screening results into the nursing process to adapt psychosocial nursing care five years after implementation	Hematologic, oncologic, and radio-oncologic wards of the Comprehensive Cancer Centre Zurich at the University Hospital Zurich, with 29 beds. Patients hospitalized for cancer treatment or complications related to the disease or treatment, but not palliative care between September 2012 and December 2016. 30 nurses on the ward with about 40% with several years of oncological care experience, and 4-5 nurses with postgraduate education in oncologic care. A nurse cares for 4-5 patients. 3 hemato-oncologists and 1 radio-oncologist. Nurses and doctors discuss medication and psychosocial problems every day. Specialized services on-site such as physical therapy, nutritional counseling, psycho-oncology, social services involved as needed.	Hand out and explain the DT to every inpatient upon admission. Nurses discuss the results and ask the patient for referral permission when the distress level is above 5. If patient does not fill out DT, reason is recorded. Data are stored in the EHR. Patients with moderate to severe distress levels are screened again after 7 days. Referrals: Nurses can refer patients to a team of social workers. Referral to the psycho-oncology team of psychiatrist and psychologists can be authorized by the oncologist. Psycho-oncologist visits the patient on to several times during hospitalization and care is organized for outpatient.	DT and Screening Protocol	N/A

Author, Year Title	Setting/Health System/Patient Characteristics	Methods for the implementation of the screening program (e.g., program features such as staff training), screening, and follow-up	Screening Tool(s) Used	Outcome/Findings
Chow, 2020[31] Examining the feasibility, acceptability, and potential utility of mobile distress screening in adult cancer patients	Cancer patients receiving active cancer treatment at an infusion clinic in an NCI designated cancer center between June and August 2017.	Patients receive text message invitations to compete a distress screener once a week for 4 weeks sent at 8 pm local time, or at a time of their choosing. In the event of a high distress score, an automatic email was sent to the patient's primary cancer care provider.	PHQ-4	75% of screening surveys were completed. 85% of participants completed at least 1 screener, and 68% completed all screeners. Time to complete the screener ranged from an average of 43 -75 seconds. Participants reported that the screener was easy to use, that they were satisfied with it, that it accurately captured their weekly mood, that completing the screener met an important need and made them feel better cared for, and that they were comfortable with their care providers seeing their scores and that they had little concern about data privacy and felt that completing the screener was low burden.

Abbreviations: CI=confidence interval; CPC=Canadian problem checklist; DT=distress thermometer; EHR=electronic health record; EORTC-QLQ(-C30 or -LC13)= European organization for research and treatment of cancer quality of life questionnaire (30-item general or 13-item lung cancer module); EQ-5D=EuroQuol 5-item questionnaire; ESAS=Edmonton symptom assessment system; FACT-G=functional assessment of cancer therapy-general; HADS=hospital anxiety and depression scale; N/A=not applicable; NCCN=national comprehensive cancer network; NCI=national cancer institute; OR=odds ratio; PHQ-4=patient health questionnaire 4-item score; PSQ-III=patient satisfaction questionnaire III; QOL=quality of life; SCID=structured clinical diagnostic interview.

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Conflict of Interest: None of the investigators have any affiliations or financial involvement that conflicts with the material presented in this report.

Acknowledgements

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Appendix A: Methods

In response to the submitted nomination, we conducted a search for existing systematic reviews. We searched for high-quality, completed or in-process evidence reviews published in the last three years May, 2017 to May, 2020 on the questions of the nomination from these sources:

- AHRQ: Evidence reports and technology assessments
  - AHRQ Evidence Reports https://www.ahrq.gov/research/findings/evidence-based-reports/index.html
  - EHC Program https://effectivehealthcare.ahrq.gov/
  - US Preventive Services Task Force https://www.uspreventiveservicestaskforce.org/
  - AHRQ Technology Assessment Program https://www.ahrq.gov/research/findings/ta/index.html
- US Department of Veterans Affairs Products publications
  - Evidence Synthesis Program https://www.hsrd.research.va.gov/publications/esp/
  - VA/Department of Defense Evidence-Based Clinical Practice Guideline Program https://www.healthquality.va.gov/
- Cochrane Systematic Reviews https://www.cochranelibrary.com/
- Epistemonikos https://www.epistemonikos.org/
- PROSPERO Database (international prospective register of systematic reviews and protocols) http://www.crd.york.ac.uk/prospero/
- PubMed https://www.ncbi.nlm.nih.gov/pubmed/

Once it was determined that a systematic review was not desired, we conducted a search in PubMed for citations published in the past five years (June 2015 – June 2020) using the search strategy below. We included any type of publication that addressed implementation of oncology distress screening directly, or publications in which oncology distress screening was implemented even if this was not the focus of the publication. We presented the findings in the tables, separated into articles that present only recommendations and that did not conduct a study (Table 1), studies of a Canadian program in which Cancer care clinician dyads from 18 institutions were trained/supported in the implementation of an oncology program at their institutions (Table 2), and individual studies that involved direct implementation of distress screening in oncology (Table 3). We only extracted into the tables information deemed potentially useful for guiding implementation.

"Mass Screening"[MeSH Terms] AND "neoplasms/psychology"[MeSH Terms]) OR "distress screening"[Title/Abstract]