HHS Public Access

Author manuscript

J Natl Compr Canc Netw. Author manuscript; available in PMC 2018 November 01.

Published in final edited form as:

J Natl Compr Canc Netw. 2016 April ; 14(4): 407–414.

Corresponding author: Gabrielle Betty Rocque, MD, WTI 240E, 1720 2ND Ave S, Birmingham, AL 35294, 205.975.2914 (office), 205.975.3919 (fax), grpcque@uabmc.edu.

Patient Care Connect Group:

UAB Comprehensive Cancer Center, Birmingham, AL:

Edward E. Partridge, MD

Gabrielle B. Rocque, MD

Elizabeth A. Kvale, MD

Maria Pisu, PhD

Wendy Demark-Wahnefried, PhD

Karen Meneses, PhD

Michelle Y. Martin, PhD

Mona Fouad, MD

Yufeng Li, PhD

Bradford E. Jackson, PhD

Kelly Kenzik, PhD

Xuelin Li, PhD

Richard Taylor, DNP

Aras Acemgil, MBA

Carol Chambless

Nedra Lisovicz, PhD, MPH

Valeria Pacheco-Rubi, MBA

Karina I. Halilova, MD, MPH

Warren Smedley,

Terri L. Salter, RN, MSN, MBA

Memorial Hospital, Chattanooga, TN:

Lee Jackson, MD

Zoe Scott, RN, MSN, FNP, NP-C

Northside Hospital Cancer Institute, Atlanta, GA:

Guilherme Cantuaria, MD, PhD

Debbie, Bickes, RN, MSN, OCN

Tina Berry, BS

Patti Owen, RN, MSN

Gulf Coast Regional Medical Center, Panama City, FL:

George Reiss, MD

Edy Rivard, RN, MSM

Hang Mai, RN

Ft. Walton Beach Medical Center, Ft. Walton Beach, FL:

Ming Chang, MD

Louis Gomez, RN

Singing River Health System, Pascagoula, MS:

James Clarkson, MD

Maggie Clarkson, RN, MS, CCRP

SE Alabama Medical Center, Dothan, AL:

Steven Stokes, MD

Scott Griffin

Melissa Lewis, RN, MSN

Tina Newman, RN

Russell Medical Center, Alexander City, AL:

Mary Sheffield, MD

Mabry Cook

Rosemary V Brigham, LBSW

NE Alabama Regional Medical Center, Anniston, AL:

Ellen Spemulii, MD

Joe Weaver, COO

Wendy Watson, RN

Marshall Medical Center, Albertville, AL:

Tom Payne, MD

Cindy Sparkman

Hanna Bright, RN/ Nurse Navigator

Mitchell Cancer Institute, Mobile, AL:

Thomas Butler, MD

Cathy Tinnea, LPN, CLT

Medical Center Navicent Health, Macon, GA:

Fred Schnell, MD

Ron Lazar, MBA, CMBB

Cyndi Pyle, RN, BSN

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Guiding Lay Navigation in Geriatric Cancer Patients Using a Distress Assessment Tool

Gabrielle B. Rocque, MD^{1,2}, Richard A. Taylor, DNP, CRNP^{1,4}, Aras Acemgil, MBA^{1,3}, Xuelin Li, MS³, Maria Pisu, PhD^{1,3}, Kelly Kenzik, PhD³, Bradford E. Jackson, PhD³, Karina I. Halilova, MD, MPH¹, Wendy Demark-Wahnefried, PhD, RD¹, Karen Meneses, RN, PhD, FAAN^{1,4}, Yufeng Li, PhD^{1,3}, Michelle Y. Martin, PhD³, Carol Chambless¹, Nedra Lisovicz, PhD, MPH^{1,3}, Mona Fouad, MD, MPH^{1,3}, Edward E. Partridge, MD¹, Elizabeth A. Kvale, MD^{1,5}, and Patient Care Connect Group

¹Comprehensive Cancer Center

²Division of Hematology and Oncology

³Division of Preventive Medicine

⁴School of Nursing, University of Alabama at Birmingham

⁵Birmingham VA Medical Center

Abstract

Background: There is growing interest in psychosocial care and evaluating distress in cancer patients. As of 2015, the Commission on Cancer requires cancer centers to screen patients for distress, but the optimal approach to implementation remains unclear.

Methods: We assessed feasibility and impact of using distress assessments to frame lay navigator-patient interactions in geriatric cancer patients that were enrolled in navigation between 1/1/2014 and 12/31/2014.

Results: Of the 5121 patients enrolled in our lay patient navigation program, 4,520 (88%) completed at least one assessment using a standardized distress tool (DT). Navigators used the tool to structure both “formal” and “informal” distress assessments. Twenty-four percent of patients reported distress scores 4 and 5.5% reported distress scores 8. The most common sources of distress at initial assessment were pain, balance/mobility difficulties, and fatigue. Minority patients reported similar sources of distress as the overall program population, with increased relative distress related to logistical issues such as transportation and financial/insurance questions. Patients were more likely to ask for help with questions about insurance/financial needs (79%), transportation (76%) and knowledge deficits about diet/nutrition (76%) and diagnosis (66%) when these items contributed to distress.

Conclusions: Lay navigators were able to routinely screen for patient distress at a high degree of penetration using a structured distress assessment.

Conflict of Interest/Disclosure Statements:

The contents of this publication are solely the responsibility of the authors and do not necessarily represent the official views of the U.S. Department of Health and Human Services or any of its agencies.

Background:

Since the inception of the distress thermometer in 1998,¹ the tool has been refined and used in multiple cancer populations to identify patients with distress and characterize causes of distress.^{2–9} The National Comprehensive Cancer Network (NCCN) recommends use of the distress thermometer or similar tools as a method for consistent measurement of distress for cancer patients.¹⁰ In 2015, the Commission on Cancer (CoC) began a phased-in program to screen for distress as part of its certification requirements. Despite the CoC initiative, implementation of distress screening has been challenging, with only half of NCCN institutions screening all outpatients in 2012.¹²

Barriers to implementation of distress screening in routine clinical practice include time limitations of staff, knowledge deficits, and lack of reimbursement for time devoted to screening.¹³ Moreover, the optimal approach to screening is unclear. Some institutions use patient interviews, some use patient self-report with paper or electronic questionnaires, and some use a combination of these methods.¹² When interviews are used to assess distress, oncology nurses¹⁴ and nurse navigators¹⁵ are often tasked with administering distress evaluations as part of their workflow, but an advanced clinical skill level may not be essential for distress screening.

In previous studies, 31–62% of patients reported high distress levels.^{3–5,9,16} Increased distress is associated with reduced quality of life, increased mortality, and higher healthcare expenditures.^{15,17,18} In geriatric patients, 14–40% report depression and over 40% report significant distress.^{16,19} In urban geriatric patients, poor physical function was a predictor of distress.¹⁶ Little data exist on screening of geriatric patients in rural, community settings. In addition, the sources of distress for this patient population have not been characterized.

Patient navigators may be able to both screen for and to mitigate sources of distress for cancer patients. Navigators help patients to navigate the health system and overcome barriers to receiving high-quality healthcare.²⁰ The CoC now requires provision of navigation services for accreditation.²¹ There are a growing number of lay navigation programs using non-nurse community members (specialized community health workers) to provide these services to patients, particularly in underserved communities.²² Navigator programs have shown benefits in reducing disparities in access to care for prevention, early detection, and early treatment of cancer,^{23–27} and improving patient experience.^{14,28,29} Despite mounting evidence of the benefits of navigation and the emergence of navigator-training programs with recommended competencies,^{30–32} the process of navigation is yet to be standardized and tools to guide daily operations are lacking.³⁰ We proposed that lay patient navigators could use a distress tool (DT) to guide interactions with geriatric (≥ 65 years old) cancer. We conducted an exploratory, descriptive implementation study of the integration of the DT into routine practice within a lay navigation program to guide patient interactions and respond to patient needs.

Methods:

Setting: Patient Care Connect Program

The Patient Care Connect Program (PCCP) is a lay navigation program, which serves cancer patients over 65 years of age with primary fee-for-service Medicare insurance within the University of Alabama at Birmingham (UAB) Health System Community Cancer Network. This network includes 12 sites across Alabama, Georgia, Florida, Mississippi, and Tennessee (Figure 1). The PCCP, including navigator salaries, was supported by a Center for Medicare and Medicaid Innovation (CMMI) grant from 2012–2015 and was first implemented at UAB in March 2013. Extensive training was provided to site medical directors (oncology physicians), nurses, and other members of oncology care teams to orient them to navigation processes and goals including routine distress assessment and reporting. Program leadership visited each site quarterly to reinforce relationships and program processes. Navigators at all sites were assisting patients within the program by October 2013. We report data collected on patients enrolled over a 1-year period from 1/1/2014 through 12/31/2014. The evaluation of the PCCP process and effectiveness was approved by the IRB of the University of Alabama at Birmingham and affiliate sites.

Navigators

PCCP navigators are lay individuals (non-clinically trained) from the community hired at each institution as part of the PCCP program. They may have previous experience in healthcare, such as working as a chaplain, receptionist, or medical assistant, but this is not a requirement. Each of the 12 sites across the network has responsibility for recruiting their navigators, who are ideally trusted members of the community they serve. The navigators receive 80 hours of didactic training covering basic concepts of navigation, communication, advanced care planning, palliative care, and cancer followed by an additional 80 hours of site orientation, communication practicum, and shadowing in clinical settings. Within this program, ~40 lay navigators at 12 cancer centers provide support to cancer patients across the continuum of disease from the time of diagnosis through survivorship and/or the end of life. A nurse site manager at each location supervises the navigators. Each navigator is able to provide support to as many as 135 patients at a given time.

Patients: All patients over 65 years of age with primary fee-for-service Medicare insurance and with a cancer diagnosis are included with the exception of incarcerated patients and those living in a skilled nursing facility. During the first encounter with patients, navigators record characteristics including cancer stage, cancer type, diagnosis date, age, sex, race/ethnicity, presence of selected “high risk” comorbidities (congestive heart failure, chronic obstructive pulmonary disease, interstitial lung disease, renal disease, diabetes, stroke).

Distress Assessment: The DT was adapted from the distress thermometer used by the NCCN.¹⁰ The tool includes both a thermometer image, which is used to quantify the distress level from 0 (no distress) to 10 (extreme distress), and a problem list to help delineate the source of distress within the last week.^{10,13} Distress score of 4 is considered the cut-off for clinically meaningful elevations in the level of anxiety and distress.³³ Distress levels of 8 or greater were considered high, warranting same-day notification of the clinical team. This

cutoff was chosen by based on investigator experience to capture patients with acute needs, particularly symptoms, which needed prompt referral to the clinical team. To provide a more comprehensive view of patient's distress, we expanded the problem list to include additional barriers, which were identified through review of literature on geriatric syndromes,^{34–36} consensus of investigators and geriatric consultant experts, and early navigator encounters with patients.^{5,15,37} This revised distress tool identifies problems in the following domains: Practical; Family; Emotional; Spiritual; Financial; and Physical. This tool was built into a standardized, publically available navigation software, Medical Concierge®, which is used by all sites.

Navigation Process

Navigators are trained to use a systematic algorithm with distress assessment at the center to guide contact with patients. Contacts occur both in person and via telephone. At their first patient encounter, navigators assess patients and record an overall level of distress and any problems that contribute to distress as part of a “formal” distress screen. When navigators identify a patient-reported source of distress, they ask if patients desire assistance with that item. Distress levels, causes of distress, requests for assistance, and resources used to respond to distress are recorded after each contact in a shared HIPAA compliant electronic database.

Navigators intervene when the overall distress score is greater than or equal to 4 or the patient requests assistance. Distress scores of 4 triage patients to more frequent contact (at least monthly). For those with moderate or high distress (>8), the navigator responds to any issues they can address and escalates the issue to the clinical team via the nurse manager. Interventions include supporting self-management, troubleshooting barriers to care with patients, connecting patients with community resources, and engaging healthcare providers. Navigators follow up with the patient again within 1 month and complete either a “formal” DT or an “informal” DT. A “formal” DT includes review of all domains, whereas an “informal” DT is a focused review without evaluation of *all items* on the DT. These “informal” DTs are most often completed as a second or later DT in response to a previously identified patient need. Although “formal” DTs are recommended for the first contact, navigators may use an “informal” DT to report concerns identified during if they are not able to complete the full “formal” DT for any reason. A previously reported distress item is recorded as “addressed” when the patient reports that they no longer need help with it during a follow-up DT. For patients with low distress levels and no active concerns, the follow up schedule prompts navigator contact at least every 3 months. Patients are considered high-risk and are triaged to more frequent contact schedules if they report high distress, active concerns, high-risk cancers, are on high-risk medication, or have high-risk comorbidities (Appendix A). Navigators are instructed to perform a “formal” DT at initial contact and at least every 6 months for navigated patients.

Fidelity to distress assessment, data collection, and use of care maps to address sources of distress was supported through real-time review of data, monthly calls with site managers and medical directors to reinforce processes, and weekly teleconferences with navigators to reinforce consistency and address challenges encountered.

Data Collection and Analysis:

To describe the use of the DT, data were extracted from the electronic database on all patients actively enrolled in the program from 1/1/2014 – 12/31/14. One additional month of data collection was included to ensure that patients enrolled late in 2014 had at least 1 month in the program, during which we would expect a DT to be completed. The statistical analysis is descriptive; we provide frequency count and percentage for category variables; mean and standard deviation, and median with range for continuous variables.

Outcomes

For this implementation study, we explored the feasibility and penetration of distress screening, sources of distress, and the delivery of navigation services in geriatric cancer patients.

- Feasibility: reported as the proportion of the total population that was screened for distress.
- Distress characterization: We describe the distress level and sources of distress.
- Delivery of navigation services: We describe requests for assistance generated through distress assessment and proportion of requests that were addressed by the navigator.
- Navigator Reporting: We describe methods of navigator reporting to practices and health systems.

RESULTS:

Patient demographics:

5,121 new patients were enrolled in PCCP from 1/1/14–12/31/14. The average length of time in the program was 5.16 months. Patient characteristics are shown in Table 1. The average age of participants was 75 years (range 65–100 years). Fourteen percent of participants were minorities and 35% had at least one other high-risk comorbidity in addition to their cancer diagnosis.

Feasibility of using distress screening as a navigation tool:

Of the 5,121 patients identified to be eligible for PCCP, 4,520 (88%) completed at least one DT. More than half of DTs were completed through telephone contact. Common reasons for missing DTs included patient death prior to contact (2%), inability to reach the patient after 3 attempts (3.3%), refused services (1.1%), and change in eligibility status between identification and first contact (2.3%).

Of the 4,520 initial DTs completed for patients, 84.4% were formal and 15.6% were informal DTs. Of those with an initial “informal” DT, 38.6% patients later completed a “formal” evaluation. Of all initial DTs, 20.9% percent of patients had a DT with distress items but no overall distress score. Repeat DTs were available on 2,630 patients (58.2% of total). Of the second distress screenings, 62.4% were formal and 37.6% were informal. The

maximum number of distress screenings collected on one patient was 33 over an 11-month period and the average number per patient was 2.3 (median 2).

Distress levels in geriatric cancer patients:

The mean distress score was 2.32 for the 3,572 patients with a recorded distress level (range 0–10); 24.0% percent of patients reported distress scores 4 and 5.5% reported distress scores 8.

Sources of distress:

The most common sources of distress at initial assessment were pain (408/5254 cases reporting a cause of distress), balance/mobility difficulties (404 cases), and fatigue (399 cases; Figure 2a). This breakdown was similar for “formal” and “informal” DTs. Patients with distress scores 8 were more likely to report psychological symptoms such as anxiety, feeling depressed, or worry (Figure 2b). Minority patients reported similar sources of distress as the overall program population, with increased relative distress related to logistical issues such as transportation and financial/insurance questions (Figure 2c).

Delivery of navigation services for distress:

Although symptoms (pain and fatigue) were the most common sources of distress identified, only 46.3% of individuals reporting pain also requested assistance for pain. Patients were most likely to ask for help with questions about insurance/financial needs (79.1%), transportation (75.5%) and knowledge deficits about diet/nutrition (75.9%) and diagnosis (67.1%) when these items were sources of distress (Figure 2a).

When patients requested assistance with a source of distress, 94.7% were subsequently reported as addressed to the patient’s satisfaction (Figure 2). The interventions used to address patient’s distress varied based on the type of distress. Common interventions utilized to address distress include coaching for self-management, referral to provider, referral to nurse site manager, connection to community resources, and provision of information from the National Cancer Institute, American Cancer Society, and other trusted resources (Appendix B). As an example, for transportation, the navigators often assisted the patient to identify a ride from a family member or friend. When this was not possible, they connected patients with community resources to obtain gas cards, “Angel Bus”, or other charity transportation companies.

Discussion:

Lay navigators were able to routinely screen for patient distress at a high degree of penetration using a structured distress assessment. In this implementation, screening by navigators was highly successful with 9 out of 10 patients within the program having a DT recorded. Among patients who did not have a completed DT, this was most commonly due to inability to contact patient, patient refusal, and death. Although nurse-based screening during clinic appointment might capture additional patients, such an approach utilizes skilled nursing time, perhaps inappropriately, and does not easily allow for screening for distress between visits. Navigators effectively called patients between visits to identify

problems experienced outside of the isolated clinic visits. The levels of distress observed in this population and the concerns identified are consistent with studies conducted with more formal methodologies, suggesting that lay navigators were able to accurately assess and record sources of distress using a distress tool^{38,39}.

The DT expands on a typical symptom-based evaluation by providing a structure to identify concerns in multiple domains including informational, logistical, financial, social, emotional, and spiritual aspects of care. This multi-dimensional evaluation provides a patient-centered framework for the navigator/patient interaction. In this implementation, patient engagement in the process was further encouraged as they were asked to prioritize issues for navigator assistance. The navigators were also directed to respond to moderate or greater distress levels (4)³³ by increasing the frequency of contact to monthly or more frequently. This targeting methodology maximizes the intensity of the intervention to those patients with higher demonstrated need.

The navigators reported patients' needs were met in 95% of cases where the patient requested assistance. Given the nature of these data, we are unable to ascertain whether the problem was actually resolved or patients were reporting that they no longer felt a need for assistance with the distress item.

Patients often did not want assistance with all items that contributed to distress. The most frequently reported sources of distress in this sample were physical symptoms such as pain and mobility issue, yet patients were less likely to request assistance with these issues. Anecdotally, navigators reported that patients often attributed symptoms to chronic physical issues that were managed on current medications or that were being addressed by their physician. "New" and "chronic" sources of symptom burden were not distinguished in this study. It is possible that patients may be more likely to request assistance from the navigator on non-clinical issues, such as transportation, and rely more on the clinical team for clinical concerns. Although lay navigators in this program escalated clinical needs to the clinical teams as directed by care plans, patients may have effectively "self-edited" their requests for assistance to those items they felt were within the navigators' influence. This merits further exploration as we seek to examine how distress assessment can assist in identifying patient needs and framing care.

Rather than using free text notes, the lay navigators used the Medical Consierge® software tool to record their interactions. Navigators could provide reports on individual patients to other members of the healthcare team. This approach allowed for transmission of information to the oncology physicians and nurses in a consistent format and allowed for robust standardized data collection across the population. By screening with a comprehensive distress assessment, the navigators were able to assist with many sources of distress, which may not have risen to the attention of the physician. Within this model, the navigators were able to address the non-clinical issues and notify other members of the care team about clinical concerns, such that the oncologists and nurses could focus on clinical management during clinic visits. Such a model has the potential to enhance both the quality and efficiency of oncology care and further examination of this impact is merited.

When evaluated in aggregate, health systems can use DT reports to identify gaps in care within the community and matched philanthropic efforts with patient needs. For example, transportation was a barrier to care for many patients within our health system. At one site, these data were used to demonstrate need to the hospital, which responded by developing a transportation fund for patients in their community to address this gap.

One limitation of this study is that lay navigators do not have research expertise, which may have impacted data collection. Specific training for lay navigators in data integrity and quality assurance processes was provided and facilitated consistent implementation and use of the DT. This limitation presents an addressable challenge, and is balanced by the richness and validity of the data collected as part of routine practice within a lay navigation program. We also acknowledge that the integration of lay navigators into patients' healthcare teams may be challenging for some institutions. For the distress screening to have an impact on symptom burden, identified distress items must be rapidly communicated to the healthcare team to address patient's symptoms. In this implementation, the communication protocol was developed prior to initiation of screening.

Conclusion:

Distress screening can be integrated into navigation programs to enhance uptake of distress screening. The described use of the DT supports systematic screening of navigated patients. This approach has the additional advantage of providing standardization of care, standardization of data collection, and a structure for lay (non-medically trained) navigators to extend the workforce available to support patients during their cancer journey. Monitoring of data from the distress assessments allows a unique opportunity to understand the causes of distress and unmet needs of patients. Technology to allow the monitoring of data in real-time can facilitate the development of initiatives to improve patient experience. This approach also allows for programmatic monitoring of navigator contact with patients, assessments, and interventions. Finally, the use of distress assessments during navigation allows programs to demonstrate their impact by recording their ability to respond to causes of distress. Further work is needed to determine the impact of distress screening on patient outcomes within multi-level, multi-modal programs such as the navigation program we have described.

Acknowledgement:

Dr. Rocque is supported by a Walter B. Frommeyer, Jr., Fellowship in Investigative Medicine. This funding source had no role in the design and conduct of the study; collection, management, analysis, or interpretation of the data; and preparation, review, or approval of the manuscript for publication.

This publication was made possible by Grant Number 1C1CMS331023 from the Department of Health and Human Services, Centers for Medicare & Medicaid Services.

REFERENCES:

1. Roth AJ, Kornblith AB, Batel-Copel L, Peabody E, Scher HI, Holland JC. Rapid screening for psychologic distress in men with prostate carcinoma: a pilot study. *Cancer* 1998;82(10):1904–1908. [PubMed: 9587123]

2. Ransom S, Jacobsen PB, Booth-Jones M. Validation of the Distress Thermometer with bone marrow transplant patients. *Psycho-oncology* 2006;15(7):604–612. [PubMed: 16208733]
3. 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(12):2924–2931. [PubMed: 17103381]
4. Dabrowski M, Boucher K, Ward JH, et al. Clinical experience with the NCCN distress thermometer in breast cancer patients. *Journal of the National Comprehensive Cancer Network : JNCCN* 2007;5(1):104–111. [PubMed: 17239330]
5. Graves KD, Arnold SM, Love CL, Kirsh KL, Moore PG, Passik SD. Distress screening in a multidisciplinary lung cancer clinic: prevalence and predictors of clinically significant distress. *Lung cancer* 2007;55(2):215–224. [PubMed: 17084483]
6. Gessler S, Low J, Daniells E, et al. Screening for distress in cancer patients: is the distress thermometer a valid measure in the UK and does it measure change over time? A prospective validation study. *Psycho-oncology* 2008;17(6):538–547. [PubMed: 17973237]
7. Ma L, Poulin P, Feldstain A, Chasen MR. The association between malnutrition and psychological distress in patients with advanced head-and-neck cancer. *Current oncology* 2013;20(6):e554–560. [PubMed: 24311956]
8. Chambers SK, Zajdlewicz L, Youlden DR, Holland JC, Dunn J. The validity of the distress thermometer in prostate cancer populations. *Psycho-oncology* 2014;23(2):195–203. [PubMed: 24027194]
9. Loquai C, Scheurich V, Syring N, et al. Screening for distress in routine oncological care—a survey in 520 melanoma patients. *PloS one* 2013;8(7):e66800. [PubMed: 23861748]
10. National Comprehensive Cancer Network. NCCN Guidelines: Distress Management (Version 2.2013)
11. Jacobsen PB, Ransom S. Implementation of NCCN distress management guidelines by member institutions. *Journal of the National Comprehensive Cancer Network : JNCCN* 2007;5(1):99–103. [PubMed: 17239329]
12. Donovan KA, Jacobsen PB. Progress in the implementation of NCCN guidelines for distress management by member institutions. *Journal of the National Comprehensive Cancer Network : JNCCN* 2013;11(2):223–226. [PubMed: 23411388]
13. Vitek L, Rosenzweig MQ, Stollings S. Distress in patients with cancer: definition, assessment, and suggested interventions. *Clinical journal of oncology nursing* 2007;11(3):413–418. [PubMed: 17623625]
14. Livingston PM, Craike MJ, White VM, et al. A nurse-assisted screening and referral program for depression among survivors of colorectal cancer: feasibility study. *The Medical journal of Australia* 2010;193(5 Suppl):S83–87. [PubMed: 21542453]
15. Carlson LE, Waller A, Mitchell AJ. Screening for distress and unmet needs in patients with cancer: review and recommendations. *Journal of clinical oncology : official journal of the American Society of Clinical Oncology* 2012;30(11):1160–1177. [PubMed: 22412146]
16. Hurria A, Li D, Hansen K, et al. Distress in older patients with cancer. *Journal of clinical oncology : official journal of the American Society of Clinical Oncology* 2009;27(26):4346–4351. [PubMed: 19652074]
17. Han X, Lin CC, Li C, et al. Association between serious psychological distress and health care use and expenditures by cancer history. *Cancer* 2015;121(4):614–622. [PubMed: 25345778]
18. Hamer M, Chida Y, Molloy GJ. Psychological distress and cancer mortality. *Journal of psychosomatic research* 2009;66(3):255–258. [PubMed: 19232239]
19. Extermann M, Hurria A. Comprehensive geriatric assessment for older patients with cancer. *Journal of clinical oncology : official journal of the American Society of Clinical Oncology* 2007;25(14):1824–1831. [PubMed: 17488980]
20. Freeman HP. The history, principles, and future of patient navigation: commentary. *Seminars in oncology nursing* 2013;29(2):72–75. [PubMed: 23651676]
21. Krok-Schoen JL, Brewer BM, Young GS, et al. Participants' barriers to diagnostic resolution and factors associated with needing patient navigation. *Cancer* 2015.

22. Hedlund N, Risendal BC, Pauls H, et al. Dissemination of patient navigation programs across the United States. *Journal of public health management and practice : JPHMP* 2014;20(4):E15–24. [PubMed: 24858322]
23. Freund KM, Battaglia TA, Calhoun E, et al. Impact of patient navigation on timely cancer care: the Patient Navigation Research Program. *Journal of the National Cancer Institute* 2014;106(6):dju115.
24. Lisovicz N, Johnson RE, Higginbotham J, et al. The Deep South Network for cancer control. Building a community infrastructure to reduce cancer health disparities. *Cancer* 2006;107(8 Suppl):1971–1979. [PubMed: 16921494]
25. Fouad M, Wynn T, Martin M, Partridge E. Patient navigation pilot project: results from the Community Health Advisors in Action Program (CHAAP). *Ethnicity & disease* 2010;20(2):155–161. [PubMed: 20503896]
26. Fouad MN, Partridge E, Dignan M, et al. Targeted intervention strategies to increase and maintain mammography utilization among African American women. *American journal of public health* 2010;100(12):2526–2531. [PubMed: 21068422]
27. Madore S, Kilbourn K, Valverde P, Borrayo E, Raich P. Feasibility of a psychosocial and patient navigation intervention to improve access to treatment among underserved breast cancer patients. *Supportive care in cancer : official journal of the Multinational Association of Supportive Care in Cancer* 2014;22(8):2085–2093. [PubMed: 24639035]
28. Wagner EH, Ludman EJ, Aiello Bowles EJ, et al. Nurse navigators in early cancer care: a randomized, controlled trial. *Journal of clinical oncology : official journal of the American Society of Clinical Oncology* 2014;32(1):12–18. [PubMed: 24276777]
29. Hryniuk W, Simpson R, McGowan A, Carter P. Patient perceptions of a comprehensive cancer navigation service. *Current oncology* 2014;21(2):69–76. [PubMed: 24764695]
30. Calhoun EA, Whitley EM, Esparza A, et al. A national patient navigator training program. *Health promotion practice* 2010;11(2):205–215. [PubMed: 19116415]
31. Sparc: Navigator Curriculum 2014; <http://sparcsupport.org/sparc-navigator-curriculum/>. Accessed 7/17/14.
32. Ruiz Y, Matos S, Kapadia S, et al. Lessons learned from a community-academic initiative: the development of a core competency-based training for community-academic initiative community health workers. *American journal of public health* 2012;102(12):2372–2379. [PubMed: 22594730]
33. Baken DM, Woolley C. Validation of the Distress Thermometer, Impact Thermometer and combinations of these in screening for distress. *Psycho-oncology* 2011;20(6):609–614. [PubMed: 21370311]
34. Aging Balducci L., frailty, and chemotherapy. *Cancer Control* 2007;14(1):7–12. [PubMed: 17242666]
35. Carreca I, Balducci L, Extermann M. Cancer in the older person. *Cancer Treat Rev* 2005;31(5):380–402. [PubMed: 15967582]
36. Flood KL, Carroll MB, Le CV, Ball L, Esker DA, Carr DB. Geriatric syndromes in elderly patients admitted to an oncology-acute care for elders unit. *J Clin Oncol* 2006;24(15):2298–2303. [PubMed: 16710027]
37. 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(4):870–878. [PubMed: 18618581]
38. Jacobsen PB, Donovan KA, Trask PC, et al. Screening for psychologic distress in ambulatory cancer patients. *Cancer* 2005;103(7):1494–1502. [PubMed: 15726544]
39. Hurria A, Li D Fau - Hansen K, Hansen K Fau - Patil S, et al. Distress in older patients with cancer (1527–7755 (Electronic)).

Figure 1:
The University of Alabama Health System Cancer Community Network

Figure 2: Distress Items, Requests for Assistance, and Resolution of patient concern in (A) All patients (B) Patients with a distress score ≥ 8 and (C) Minority patients Attachment A. Modified Distress Assessment

Table 1:

Patient Characteristics (n = 5121): *High-risk comorbidities include congestive heart failure, chronic obstructive pulmonary disease, interstitial lung disease, renal disease, diabetes, stroke

	%	N
Age		
65 to 74	52.7%	2701
75 to 84	36.4%	1863
>= 85	10.9%	557
Gender		
Male	45.6%	2335
Female	53.8%	2755
Missing	0.6%	31
Race		
White	85.1%	4358
AA	12.5%	638
Other	1.3%	66
Don't know/Not Sure	0.8%	40
Missing	0.4%	19
Comorbidities		
0	19.2%	982
1	13.2%	678
2	18.1%	925
3+	49.5%	2536
High Risk Comorbidities		
0	64.6%	3309
1	27.7%	1416
2	6.4%	329
3	1.3%	67