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Early advanced directive planning in stage III and IV cancer patients

A. Study Purpose and Rationale

Advanced directives (AD) consist of legal documents which designates a person's treatment preferences and nominates a health care proxy to make medical decisions on their behalf [1]. The benefit of completing an AD is to help ensure that individuals will receive care that is consistent with their wishes. In a survey of patients seen in an outpatient clinic, 93% expressed interest in AD planning with 70% deciding against life-sustaining therapies when asked to imagine themselves in an incompetent state with a poor prognosis [2]. Despite the overwhelming preference for these discussions, in reality only 18-36% of Americans have a completed AD [1]. In the absence of known preferences, the seriously ill who present to the hospital may receive more aggressive treatment than what they would want. Patients with advanced cancer are only slightly better with 35-40% of cancer patients having completed their AD [3]. Although this may be true, a large retrospective review only showed that 20% of metastatic cancer patients actually had their code status documented in the electronic medical record [4]. If these discussions are being had, they are not being documented consistently.

Discussions of ADs in cancer patients are often occurring during their hospitalization and at the end of life. A large retrospective analysis found that do-not-resuscitate (DNR) orders were often signed on the day of death, with 34% of these orders signed by surrogates [5]. The lack of AD discussions up until the end-of-life may stem from the reluctance of both patients and oncologists to discuss these topics. In a study looking at cancer patients admitted to an oncology inpatient unit, only 23% of patients without ADs prior to admission wished to have these discussions [3]. The most cited reasons in these patients were that AD discussions were not yet necessary and had no added benefit to their current care. Cancer patients maintain optimism about their prognosis, avoiding discussion of possible death and tend to avoid bringing up emotional and social issues regarding their cancer [6]. Similarly, physicians self-report not initiating discussion on these issues, which are crucial in any discussion of ADs.

The absence of AD planning among advanced stage cancer patients may lead to their poor understanding of their disease severity [7]. In a large prospective cohort study, the majority of patients with stage IV lung and colorectal cancers did not understand that the chemotherapy they were receiving was likely not curative. Surprisingly, 40% of patients with advanced cancer were not in full agreement with their cancer diagnosis [8]. In addition to the lack of complete understanding of one's illness, withholding this discussion may have potential adverse outcomes for cancer patients [9,10]. Early palliative care in patients with metastatic non-small cell lung cancer resulted in less aggressive end-of-life care, improved quality of life scores, and even improved median survival as compared to standard care [9]. Another study showed that patients without advance care planning prior to hematopoietic stem-cell transplantation in hematologic malignancies was associated with increased mortality at 1 year as compared to patients with ADs when adjusted for covariates [10].

Another commonly reported barrier which may result in this divide in communication is the belief that by addressing end-of-life goals, physicians are stripping away a patient's hope [11]. A study exposed patients to the estimated effect and survival rates of various chemotherapy regimens, and it found that patients remained hopeful despite this knowledge. Therefore the perceived barriers preventing health care providers from discussing AD early in the patients treatment course should be disregarded. Just

initiating the topic for discussion is shown to be powerful; in a randomly-controlled prospective study where advanced stage cancer patients were exposed to videos of code status discussions, 62% of patients without prior code status determination chose DNR for the video patient [12]. Starting these conversations early in the treatment course leaves adequate time for the patient to assign and discuss their goals of care with a surrogate. A retrospective study showed that inpatient's took on average, 3 separate discussions before completing their AD [13]. A retrospective study in stage IV cancer patients found that first documentation of end-of-life preferences from diagnosis was a median of 33 days [14]. Therefore, having early AD discussions in late stage cancer patient's can be done soon after diagnosis and ideally should be done early in their treatment.

The purpose of this study is to determine whether early AD discussions by oncologists in newly diagnosed advanced stage cancer patients results in improved compliance with AD completion within 2 months of this conversation. Only newly-diagnosed advance stage cancer patients with stage III or IV disease will be included as oncologists may be reluctant to initiate these discussions with early stage disease.

B. Study Design and Statistical Analysis

The study is a non-blinded, randomized-controlled, prospective study which contains two phases. Medical oncologists from the New York Presbyterian Hospital campuses at Columbia University and Weil Cornell Medical College will be asked to participate in the study. In the first phase of the study, the mean time of AD completion in newly diagnosed stage III and stage IV cancer patients will be determined within the past 6 months for each oncologist. Completion of the an AD is determined by a completed health care proxy which will be determined by the scanned document present in the patient's medical chart or physician documentation in the patient's chart. The median time to AD completion will be determined based upon all results from all the participating oncologists.

In the second phase of the study, oncologists will be stratified into two groups: "early AD" and "late AD" based upon their time to AD completion as being below or above the median time of completion for all oncologists, respectively. Therefore to account for differences in baseline practice of AD discussions, these two groups will be analyzed separately. The two groups will be randomize into either discussing AD within 1 month of the patient's first visit or to the individual oncologist's standard of care. When AD is discussed, the estimated duration of AD discussion should be recorded in the patient's medical chart. Patients with completed AD prior to the study will be excluded. Cancer patients referred to oncologists after having been seen another oncologist will be excluded except if that prior oncologist is participating in the study. In that case, the current oncologist will assume his/her standard of care approach to advance care discussion. Additionally, demographic data will be obtained for all patients and will include age, sex, ethnicity, type of cancer, stage of cancer, and performance status (via ECOG score).

The primary outcome is the completion rate for ADs among all patients 2 months or less, or after 2 months from initiation of AD discussion. A T-test will be performed for the mean completion rate in either the 2 month or less group, or greater than 2 month group. My hypothesis is that oncologists randomized to the arm of early AD discussions will show at least a 5% increase in mean AD completion rate. Given the reported mean of 35-40% of advance cancer patients having AD, to show at least a 5% improvement in AD completion powered to 80% with an alpha of <0.05, I will need 34 oncologists in each group and therefore 68 oncologists total. Currently there are 95 oncologists among the two campuses (56 at Weil Cornell Medical College and 39 at Columbia University), which would require participation of at least 72% among all oncologists.

C. Study Procedure

The entire study will take about 1.5 years with about 8 months of subject participation.

D. Study Drugs
N/A.

E. Medical Device
N/A.

F. Study Questionnaires
N/A.

G. Study Subjects
All oncologists who wish to participate will be included. Patients will be excluded if they have a completed AD prior to the study.

H. Recrultment of Subjects
Oncologists will be recruited by email, paper mail, and flyer.

I. Confidentiallty of Study Data
All study data will be uniquely coded for each participating oncologist and their patients. Data will be stored in a secure location, accessible only to the investigators.

J. Potential Conflict of Interest
There are no conflicts of interest.

K. Location of the Study
Studies will be conducted at either Columbia University or Weil Cornell Medical College. IRB will be obtained given the investigator is based at Columbia University but part of the study will be conducted at another institution. IRB approval from Weil Cornell Medical College as well.

L. Potential Risks
N/A.

M. Potential Beneflts
N/A.

N. Alternative Therapies
N/A.

0. Compensation to Subjects
No compensation will be given to subjects.

P. Costs to Subjects
Subjects will not incur any costs.

Q. Minors as Research Subjects
N/A.

R. Radiation or Radioactive Substances
N/A.

References:

1. U.S. Department of Health and Human Services Assistant Secretary for Planning and Evaluation Office of Disability, Aging, and Long-Term Care Policy. Advance directives and advance care planning: Report to Congress. http://aspe.hhs.gov/daltcp/reports/2008/ADCongRpt.pdf Accessed on April 1, 2014.
2. Emanuel LL, Barry MJ, Stoeckle JD, Ettelson LM, and Emanuel EJ. Advance directives for medical care: A case for greater use. N Engl J Med 1991;324:889-95.
3. Dow LA, Matsuyama RK, Ramakrishnan V, Kuhn L, Lamont, EB, Lykcholm L, and Smith TJ. Paradoxes in advance care planning: The complex relationship of oncology patients, their physicians, and advance medical directives. J Clin Oncol 2010; 28: 299-304.
4. Temel JS, Greer JA, Admane S, Solis J, Cashavelly BJ, Doherty S, Heist R, and Pirl WF. Code status documentation in the outpatient electronic medical records of patients with metastatic cancer. J Gen Intern Med 2009; 25:150-3.
5. Levin TT, Li Y, Weiner JS, Lewis F Bartell A, Piercy J, and Kissane DW. How do-not-resuscitate orders are utilized in cancer patients: Timing relative to death and communication-training implications. Palliative and Supportive Care 2008; 6: 341-48.
6. Detmar SB, Aaronson NK, Wever LDV, Muller M, and Schornagel JH. How are you feeling? Who wants to know? Patients' and oncologists' preferences for discussing health-related quality-of-life issues. J Clin Oncol 2000; 18: 3295-3301.
7. Weeks JC, Catalano PJ, Cronin A, Finkelman MD, Mack JW, Keating NL, and Schrag D. Patients' expectations about effects of chemotherapy for advanced cancer. N Engl J Med 2012; 367:1616-25.
8. Schubart JR, Toran L, Whitehead M, Levi BH, and Green MJ. Informed decision making in advance care planning: Concordance of patient self-reported diagnosis with physician diagnosis Support Care Cancer 2013; 21:637-41.
9. Temel JS, Greer JA, Muzikansky A, Gallagher ER, Admane S, Jackson VA, Dahlin CM, Blinderman CD, Jacobsen J, Pirl WF, Billings JA, and Lynch TJ. Early palliative care for patients with metastatic non-small-cell lung cancer. N Engl J Med 2010; 363: 733-42.
10. Ganti AK, Lee SJ, Vose JM, Devetten MP, Bociek RG, Armitage JO, Bierman PJ, Maness LK, Reed EC, and Loberiza Jr FR. Outcomes after hematopoietic stem-cell transplantation for hematologic malignancies in patients with or without advance care planning. J Clin Oncol 2007; 25:5643-48.
11. Smith TJ, Dow LA, Virago E, Khatcheressian J, Lyckholm LJ, and Matsuyama R. Givig honest information to patients with advance cancer maintains hope. Oncology 2010; 24:521-5.