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Characterizing the Nature of Scan Results Discussions: Insights Into Why Patients Misunderstand Their Prognosis

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PROBLEM FACED: Patients with incurable cancer have poor prognostic awareness, which may lead to unrealistic expectations and the pursuit of inappropriately aggressive therapy. Although it has been demonstrated that patients have poor illness understanding, little is known about what factors contribute to this prognostic disconnect. Our study sought to further characterize how oncologists discuss prognostic information with patients with advanced cancer and to identify whether this discussion contributes to patients' misperceptions.

WHAT WE DID: We listened to 128 audio-recorded encounters of multiple oncologists from four academic cancer center hospitals in the eastern, midwestern, and southwestern United States between 2004 and 2007. Eligible patients were English-speaking adults with stage IIIA, IIIB, or IV non–small-cell lung cancer. Sixty-four of these audio-recorded conversations included scan results and were subsequently categorized into good, stable, or bad news on the basis of the content of the recording. We used conversation analysis, a qualitative method for studying human interaction, to present a detailed examination of the dialogue between oncologists and patients in conversations with prognostic implications.

WHAT WE FOUND: Oncologic visits follow a typical phase structure comprising four central components: symptom-talk, scan-talk, treatment-talk, and logistic-talk. Oncologists spend little time discussing scan results and the prognostic implications in favor of treatment-related talk.

CONFOUNDING FACTORS, REAL-LIFE IMPLICATIONS: Our analysis is specific to oncologists and thus not necessarily reflective of the communication practices of other clinicians who care for seriously ill patients. Our study found a need to create space within the typical oncologic visit phase structure for prognosis communication, and we believe the paucity of this conversation significantly contributes to poor prognostic awareness demonstrated by patients with cancer. We offer a question, "Would you like to talk about what this means?" as a communication device that can regularly incorporate occasions for prognosis-talk and shared decision making. This simple question, already aligned with the way oncologists naturally communicate, could meaningfully affect dialogue surrounding prognosis, leading to enhanced prognostic awareness. JOP

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Abstract

Introduction
Patients with incurable cancer have poor prognostic awareness. We present a detailed analysis of the dialogue between oncologists and patients in conversations with prognostic implications.

Methods
A total of 128 audio-recorded encounters from a large multisite trial were obtained, and 64 involved scan results. We used conversation analysis, a qualitative method for studying human interaction, to analyze typical patterns and conversational devices.

Results
Four components consistently occurred in sequential order: symptom-talk, scan-talk, treatment-talk, and logistic-talk. Six of the encounters (19%) were identified as good news, 15 (45%) as stable news, and 12 (36%) as bad news. The visit duration varied by the type of news: good, 15 minutes (07:00-29:00); stable, 17 minutes (07:00-41:00); and bad, 20 minutes (07:00-28:00). Conversational devices were common, appearing in half of recordings. Treatment-talk occupied 50% of bad-news encounters, 31% of good-news encounters, and 19% of stable-news encounters. Scan-talk occupied less than 10% of all conversations. There were only four instances of frank prognosis discussion.

Conclusion
Oncologists and patients are complicit in constructing the typical encounter. Oncologists spend little time discussing scan results and the prognostic implications in favor of treatment-related talk. Conversational devices routinely help transition from scan-talk to detailed discussions about treatment options. We observed an opportunity to create prognosis-talk after scan-talk with a new conversational device, the question "Would you like to talk about what this means?" as the oncologist seeks permission to disclose prognostic information while ceding control to the patient.

INTRODUCTION

Patients with advanced and incurable cancer generally overestimate their probability for long-term survival and misunderstand the goals of anticancer therapy.[1,2] Weeks et al[3] showed that 69% of patients with metastatic lung cancer and 81% of patients with metastatic colorectal cancer incorrectly believed their chemotherapy was curative in intent; Rocque et al[4] found that only 65% of hospitalized patients with advanced cancer correctly

identified their cancer as incurable. In this article, we present an analysis of the nature of talk in the cancer clinic, describing why patients might misunderstand the incurable nature of their disease, and then propose a simple intervention, a question, that we anticipate will improve the quality of prognostic discussions.

Poor prognostic awareness may lead to unrealistic expectations and the pursuit of inappropriately aggressive therapy. Doctors typically convey detailed information about a serious diagnosis only in response to direct inquiries from patients.[5-7] Fifty-seven percent of oncologists self-reported that they sometimes, rarely, or never give a time frame for when they think death is likely to occur.[8] Barriers that hinder understanding in conversations about prognosis and end-of-life issues include the following: (1) bad news is bad and inherently difficult to disclose[9-11]; therefore, disclosure is often shrouded to seem more optimistic to preserve hope[12-15]; (2) patients may misinterpret their prognosis, even if it is explicitly stated by the oncologist[3]; (3) physicians and patients are often complicit in withholding or ignoring important prognostic information[16-18]; and (4) reporting bad news has been shown to be a dispreferred social action.[9,10,19,20] Simply put, just as oncologists struggle to give bad news, patients struggle to receive it.

Patient-centered health care has gained prominence as the best way of providing modern health care.[21-24] As such, shared decision making (SDM) and patient-centered communication (PCC) are seen as the key vehicles for optimal care[25-28] as both moral imperatives and means to align treatment with a patient's preferences. The incorporation of SDM and PCC into regular clinical practice, however, has been met with major impediments.[29] Barriers to achieving patient-centered care, SDM, and PCC can be organized into two general categories: (1) those due to the structure of the medical health care system itself and, most important for this article, (2) those due to the interactions between medical staff and patients.[22,23,29,30]

Although it has been demonstrated that patients have poor illness understanding, little is known about how oncologists actually discuss prognostic information with patients and whether that discussion contributes to patients' misperceptions. In this study, we collected a set of recordings of conversations between oncologists and patients when scan results were presented to analyze critical conversations with prognostic implications. Our main objectives were to first to observe how oncologists spend time in the room with patients and determine patterns of communication, with a specific focus on identifying explicit and implicit prognosis discussion. Next, using conversation analysis (CA) as our main methodologic approach, we assessed whether oncologists used conversational devices that shrouded prognosis. To our knowledge, we present a new conversational device that is expected to create a space for discussion of prognostic information as a result of our analysis. Furthermore, it may also help to maintain the principles of SDM and patient-centered care and has the potential to significantly improve prognostic communication.

METHODS

This report is a secondary analysis of data collected from a multisite, nonblinded randomized trial testing the effectiveness of the Web-based Comprehensive Health Enhancement Support System[31,32] for patients with lung cancer and caregiver dyads. Dyads were recruited from four academic cancer center hospitals in the eastern, midwestern, and southwestern United States between September 2004 and April 2007, with data collection ending in May 2009. Primary eligibility criteria were English-speaking adults with stage IIIA, IIIB, or IV non–small-cell lung cancer. A total of 518 caregiver-patient dyads were assessed for eligibility, and 144 caregiver-patient dyads received the Comprehensive Health Enhancement Support System intervention.[32] Our data set included audio-recorded encounters of multiple oncologists with the dyads from all study sites. A total of 11 physician faculty members were audio recorded at these different institutions, of whom three were women and eight were men. We listened to 128 recorded conversations. After excluding any conversations that were devoid of scan results, a further reduction in data was made because of the intensive nature of CA, which brought us to 64 conversations. These 64 conversations were then transcribed and analyzed using CA conventions. Our analysis of laudable event proposals (LEP) and/or appreciation sequences (AS) comes from the 33 cases that we found in the 64 conversations we analyzed using CA. We categorized the type of news delivered in each encounter as good, stable, or bad news on the basis of the content of the recording. To describe how oncologists and patients spend their time together, we categorized the amount of time spent in each phase of conversation on the basis of the type of news delivered. The University of Wisconsin institutional review board approved this analysis.

The oncologist-patient interactional dynamic is extremely complex and requires an equally intensive analysis technique:

CA. CA is an examination of what Sacks[33(p211)] called "naturally occurring social activities" and is a precise tool for the study of human interaction. It is an inductive, empirically driven approach that captures minute interactional features and identifies reoccurring patterns. CA focuses on the organization of an interaction—how participants recognize what the other is saying and take part in understanding one another. Analysts uncover patterns and orderly conversational devices, which are specific utterances, phrases, or sentences that provide the speaker with the ability to accomplish a social action. The result is a detailed description of the practices by which participants achieve the organization of human interactions. To give a sense of the detail involved, transcription of an audio file into a CA transcript requires approximately 10 to 100 times the length of the audio file, for example, 10 minutes of audio recording could take up to 10 hours to transcribe, including details such as prosody, microinflections, rising and falling volume and pitch, and pauses.[34] CA is an established strategy to examine the fine detail in nuanced conversations.

We previously described oncologists' routine use of two conversational devices, termed LEP and AS, as transitional phrases to help them close out and shift from reporting scan news to talking about treatment options.[35] We uncovered and specifically analyzed the use of these conversational devices.[35] These two devices showed up in more than half (ie, 33) of the transcripts. Panel 1 in Appendix Fig A1 (online only) demonstrates an LEP, defined as an utterance that offers a praiseworthy or favorable version of scan results. Oncologists use this technique to recruit patients to their perspective when the news is not exactly what the patient expected or wanted to hear. Panel 2 in Appendix Fig A1 demonstrates an AS, an utterance reminding patients to appreciate the fact that their health status is relatively good and that the treatment has been beneficial.

RESULTS

Oncology Encounter Structure Is Consistent

Medical interviews in primary care have an ordered structure of component activities.[13,35-38] We found that oncologic visits also follow a typical phase structure. In fact, 77% of them followed the typical phase structure (49 of 64), whereas 23% (15 of 64) deviated from this structure. This phase structure comprises four central components that typically follow this order: symptom-talk, scan-talk, treatment-talk, and logistic-talk. After initial greetings, patients and caregivers report on physical and psychologic symptoms, which we call symptom-talk. Next, there is a transition to reporting the most recent imaging and laboratory results, which we call scan-talk. The conversation then shifts to treatment-talk, where oncologists and patients discuss chemotherapy, radiation, surgical, or symptom management options. Finally, logistic-talk consists of coordination and organization of care (eg, instructions for scheduling a follow-up visit).

We call the interactional phase structure typical because these four components appear often, and in sequential order, across oncology visits. In fact, as shown in Panel 3 in Appendix Fig A1, when a doctor or patient attempts to skip over one of the first three phases, the attempt is often blocked or explicitly acknowledged by the other participant, demonstrating a form of resistance. Thus, in line with CA inquiry, participants co-construct and maintain the social order of these oncology visits.

Good, Stable, or Bad News

Of the 33 analyzed conversations that had an AP or LEP, six (19%) were identified as good news delivery, 15 (45%) as stable news delivery, and 12 (36%) as bad news delivery. The average amount of time oncologists spent in the room varied in relation to the type of news delivered: for good news delivery, 15:03 minutes (range, 07:25-29:05); stable news delivery, 17:14 minutes (range, 06:50-41:19); and bad news delivery, 20:53 minutes (range, 07:1428:10).

Fig 1 depicts the time spent in each phase of conversation in relation to the type of news delivered. More time was spent discussing symptoms during stable (37.2%) and good news (34.5%) delivery, whereas less time was devoted to this topic during bad news delivery. When bad news was delivered, approximately 50% of the conversation was devoted to treatment-talk, whereas with good and stable news delivery, it was 31% and 19%, respectively. Scan-talk, which is indisputably news of a prognostic nature, was always less than 10% of the entire conversation, regardless of the news type delivered. Logistic-talk made up about 15% of all conversations regardless of the type of news delivered. In all cases, the physicians spoke the vast majority of the time and demonstrated control over the direction of the discussion, particularly with regard to transitioning between different phases of the conversation. Furthermore, although we argue that these discussions are co-constructed, this does not ensure that each participant has an equal say in how conversations unfold or

what topics are brought up and when they are introduced; asymmetry in clinical interactions exists.[39,40] The transitions between the typical components were often quick.

Prognosis-Talk

There were only four instances of frank prognosis discussion in which life expectancy was discussed, and three of these instances (75%) were initiated by the patient or caregiver. We observed significant but unexplicated prognostic information most frequently shrouded in scan-talk, in which the size of a tumor was characterized either explicitly (eg, grown by 5 mm) or categorically ("getting bigger"). These interactions were too numerous to count. We also noted that patients or caregivers tried to elicit more information about the meaning of their scan results, presumably in an attempt to better decipher their underlying prognosis. These instances typically occurred at the beginning of treatment-talk, when the patient would pause the discussion about treatment and attempt to transition back to scan-talk. Some ways in which they did this included re-iterating what physicians initially stated about the scan ("So the scan is stable?"), asking for specifics about the size of the malignancy and focusing on radiographic technique (eg, contrast, type of study). The physicians' usual way of responding was to briefly reiterate what they had said previously about the scan and reattempt a transition to treatment-talk. We anticipated quantifying explicit empathetic statements, which we expected would occur during prognosis
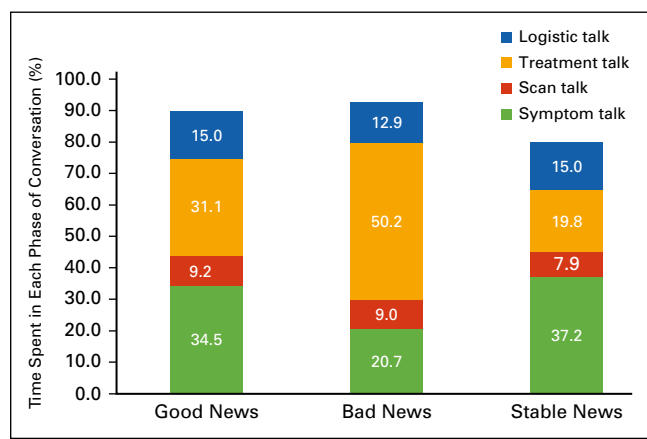

FIG 1. Time management by type of news delivery. The graph shows the amount of time spent in each phase of conversation in relation to the type of news being delivered. The percentages do not add up to 100% because we excluded the small talk that often comes at the end of the clinic visit. Such small talk includes, for example, weekend plans.

communication, but there was a notable absence of these statements.

Use of Conversation Devices

LEP and AS are common, appearing in nearly half of all recorded conversations. In 84% of these instances, they appear in association with stable or bad news (Fig 2). When it did not seem appropriate to use an LES or AS, for example, because of dire news, there were other devices physicians used, such as an optimistic projection.[10,41] In one instance, the oncologist described progression in the liver after second-line docetaxel and then upgraded this news, saying, "The good news is there there's a lot of other options here." In this conversation, an optimistic projection was used to transition to treatment-talk and functioned to obscure the nature of the bad news (Panel 4 in Appendix Fig A1).

DISCUSSION

We intended to characterize the nature of oncologist-patient talk to better understand the observed phenomenon that patients with cancer have poor prognostic awareness. Medical interviews in primary care have an ordered structure of component activities, and a similar pattern is observed in the oncologic visit. Our analysis concludes with four primary observations.

First, oncologists spend the shortest amount of time on the discussion of scan news and its prognostic implications. Oncologists seem determined to move the conversation to treatment-talk, often using an AS or LEP as the transition mechanism. An estimate of life expectancy was provided in only four clinical encounters (6%), and three of those were at the request of patients or caregivers, suggesting that prognostic discussions will occur when invited. This is important, considering recent findings that show that patients' illness understanding improves after continued prognosis discussions.[42] We observed only rare instances of empathic statements or silence to allow processing of the serious news. The paucity of explicit prognostic communication in the encounters likely contributes to the observed poor illness understanding seen nationally.[1-4] This makes it difficult to create interactional space to use the main attributes of SDM and PCC—building a consensus about the preferred treatment,[43] creating a clear understanding of the information being discussed, supporting opportunities for patient autonomy, and providing emotional support as needed.[44]

Second, oncologists quickly transition the conversation from scan-talk to treatment-talk. We observed immediate transition to treatment-talk during the disclosures of bad news, which potentially contributes to patients' misinterpretation of their prognosis and stifles any further discussions surrounding prognosis. We also found that patients and their caregivers rarely inquire about prognosis, suggesting this is a socially dispreferred action, much the same way an oncologists' disclosure of a poor prognosis might be. This preexisting dynamic sets the stage for both parties to communicate in a way that avoids explicit discussion about survival. Although avoidance may seem emotionally preferable in the short term, poor-prognosis discussions negatively affect illness understanding, which can affect advance care planning, care satisfaction,[3,45] and the amount of patient involvement in decision making.[46]

There is an opportunity after scan-talk and before treatment recommendations for an intentional pause and a question: "Would you like to talk about what this means?" By phrasing this as a question, the oncologist seeks permission to enter into a space where prognosis can be discussed while ceding control of the conversation to the patient. An affirmative response—"Yes, I would like to know"—could empower oncologists to disclose the prognostic implications of the test results. Pausing after the delivery of scan news would also create an opportunity to express empathy, an emotion that is both the imaginative reconstruction of another's perspective and the emotional resonance this creates in the

FIG 2. The frequency of laudable event proposals and appreciation sequences by type of news. These devices are most commonly associated with stable news and bad news, and less often seen in good news discussions.

self.[47] Crucially, the addition of this question does not alter the typical flow or organization of an oncologist-patient interaction and thus has the potential to improve prognostic communication without breaking its intrinsic structure.

Third, the routine use of conversational devices to transition out of scan-talk leads the discussion to detailed talk about anticancer treatment options, which are often optimistically framed and possibly misleading. This tendency is most readily apparent during the delivery of stable and bad news, which is when we see an increased incidence of AS and LEP. This suggests that oncologists realize that delivery of stable news will be construed as bad news by patients and thus pre-emptively attempt to convince patients of their belief that, for example, stable disease is good news. Although this conversational technique might seem to ease the emotional reaction to unwanted news in the short term, it also drives the conversation away from prognostic communication and minimizes empathic opportunities.

Fourth, when oncologists discuss the impact of treatment, they rely on jargon (most commonly, response rates), rather than more tangible patient outcomes. Together, these four observed communication patterns limit patient inquiries about "what this [scan results] means to the quality or duration of my life" and runs counter to the main principles of SDM and patient-centered care. Our findings contribute to this growing body of knowledge that examines the importance of diagnostic imaging results[38,48,49]; the analysis of the many impediments hindering the implementation of SDM, PCC, and patient-centered care[23,26,29,50,51]; and the literature that documents the importance of clear prognostic discussion.[3,46,52-54]

There are several strengths to this study. This was a multi-institutional study reflective of practice styles from both academic and private clinics, with oncologists trained in different programs and practicing in different parts of the country, and the sample size was relatively large for a CA study. Some limitations include the fact that nonverbal cues could not be identified or commented on by only listening to audio recordings. The audio recordings analyzed were 10 years old and might not reflect current prognosis communication practices of oncologists. Although treatment options have evolved, we have no reason to believe oncologists' communication behaviors have changed to any significant degree in the last 10 years. Our analysis is specific to oncologists and thus not necessarily reflective of the communication practices of other clinicians.

In conclusion, oncologists communicate scan results to patients with a natural and structured pattern of talk. A natural
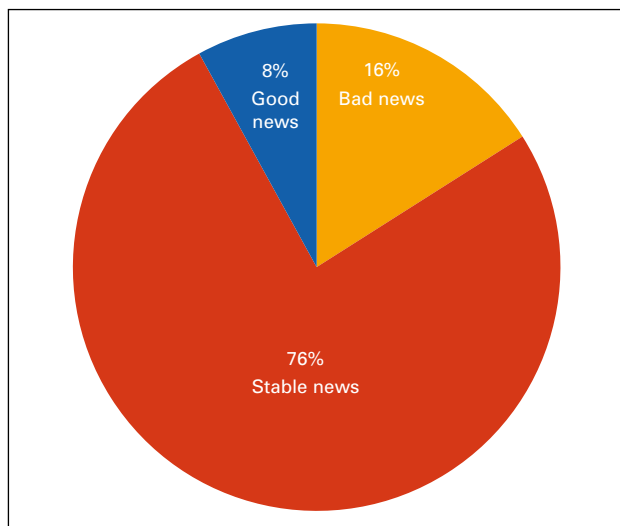
collusion to avoid the prognostic implications of the scans permeates the patient-physician relationship. There is a need to create space within the typical phase structure for prognosis communication. We propose the question "Would you like to talk about what this means?" as a communication device that can regularly incorporate occasions for prognosis-talk and SDM in the clinic encounters. It has the benefit of keeping the sequential order of the phase structure intact and maintaining the oncologist's role as the lead architect of the discussion.

Although efforts should continue to support communication skills training, our research suggests a simple modification that requires little education or training, that is aligned with the way oncologists naturally communicate, and that could meaningfully affect the dialogue. It is our hope that, as patients answer this question honestly, oncologists, too, can engage in discussion surrounding prognosis that leads to enhanced prognostic awareness and improved illness understanding. **JOP**

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AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

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Appendix

Laudible Event Proposal showing a physician suggestion of an appreciable interpretation of the CT scan results.

History: The patient is a 74-year-old white female with stage IV NSCLC, currently on a treatment break, who is seen today for surveillance scan results. The patient holds a high school diploma and her caregiver's education level is unknown. Her physician is white and female.

MD: "But let me try to do it in simple terms for you. When we look at your scans, there's only three possible results. That it's grown, which doesn't take a rocket scientist to figure out, that it's decreased in size, which again, is fairly clear, or that it's stable. The stable piece is a little trickier, because you don't know if what you're looking at is deadened scar tissue, because you have effectively treated the cancer, you know, as an ongoing basis. Or if what you're looking at could have a component of microscopic cancer cells, that you're just not appreciating on a scan. **The fact that you have been stable for such a nice period of time, really, is quite nice, we like stable**"

Patient: "I do too"

MD: "**Anything in terms of decreases are added extras, stable is a beautiful thing**"

Patient: "Right"

MD: "In the future, and you know forever and even over the past year, your scans are abnormal, always. They're always going to be abnormal, because you're always going to have scarring, you're always going to have, you know, the initial abnormalities that your scans have shown us every step of the way. So that's why it's really important to do the immediate prior comparison to today's comparison. In other words, we wouldn't go back to last year and compare today's chest scan, because it wouldn't really give us a whole lot of information. **You know, what you're doing is trying to compare and see if there are any immediate changes that need to be addressed, so stable is a beautiful thing**"

Patient: "Oh I'll take stable"

MD: "Yep, yep"

Patient: "I've been saying that right along"

MD: "Yep, absolutely"

Blocking. This panel demonstrates how one participant can block the attempt of another to skip one of the phases of the typical structure of an oncology visit. In this case, the physician blocks the caregiver's attempt to skip over symptom-talk by telling the caregiver that they will talk about the scans after she (physician) further evaluates and examines the patient. The bolded words show where the physcian blocks the attempt to transition.

History: The patient is a 69-year-old white male with stage IIIB NSCLC. He is currently off therapy and on surveillance. His caregiver is his 67-year-old wife who is also white. Both patient and caregiver hold associate or technical degrees. His physician is white and female.

Physician: Mm hm. Have you anything to eat or drink lately. Since the last couple of minutes?

Caregiver: Yes.

Patient: Yeah, I had dinner.

Physician: Okay.

Patient: Yeah. I was starving. He hm hm

Caregiver: After his CAT scans

Patient: After my…

Caregiver: And by the way, what did that show?

Physicians: **Well we'll talk about it, let me just take a look at Mister X…**

Appreciation sequence. A laudable event proposal, in which the oncologist comments on the extended period of time the patient has been receiving chemotherapy, is followed by an <u>appreciation sequence,</u> in which the oncologist solicits the patient's positive response to the laudable event proposal.

History: The patient is a 74-year-old white female with stage IV NSCLC being treated with erlotinib. Her caregiver is her white 49-year-old daughter. The patient holds a high school diploma and caregiver holds a graduate degree. Her physician is white and female.

Caregiver: "Does the scan look okay?"

Physician: "It looked great"

Patient: "But the scan does look great?"

Physician: "Umhm"

Physician: "Very stable. And I'm go-"

Patient: "So it is stable?"

Physician: So you're…you're…you're sort of right on track and we'll keep you on…umm…what we're doing. **So you are starting your fourteenth month**

Patient: "That's right"

Physician: "Yeah"

Patient: "That is right"

Physician: "**Umm which is a beautiful thing**"

Patient: "Yes"

Physician: <u>"And you, you know that and appreciate that"</u>

Patient: "Yes, oh I know that and I'm grateful everyday"

Physician: "Umhmm"

Transitioning With an Optimistic Projection. This segment demonstrates how oncologists often use optimistic projections and statements of good news (bolded) to transition out of scan-talk and into treatment-talk.

History: The patient is a 34-year-old Asian male with stage IV NSCLC. He is currently undergoing second-line treatment with docetaxel. His caregiver is his 34-year-old wife who is also Asian. The patient holds a bachelor's degree, while his wife has a graduate degree. His physician is white and male. The patient dies two months after this conversation.

Physician: Unfortunately, I think that this chemo that you've been on has probably done as much as it's gonna do. We're not seeing any further improvement in the chest.

Caregiver: Mm hmm.

Physician: And, in fact, we're seeing some new areas of disease in the liver that have come up here since the last scan. So I think that tells us that you've probably gotten as much benefit as you, we're gonna get from this treatment.

Physician: Uhm. **The good news is** that there's a lot of other options here, okay, we have a lot of other chemotherapy options available to us that, although there's no guarantee that any one will work of course, you know, they they've a lot to choose from, and I think that there's a good chance that we will see some responses to some other, other treatments. If you're willing to continue trying the treatment.

FIG A1. Examples of communication phenomena. CT, computed tomography; NSCLC, non–small-cell lung cancer.