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The Duality of Option-Listing in Cancer Care

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Abstract

Objective: Listing more than one option for treatment, termed "option-listing" (OL) is one way to facilitate shared decision-making. We seek to evaluate how oncologists do option-listing in clinical encounters across disease contexts.

Method: We coded and transcribed 90 video-recorded interactions between 5 oncologist participants and a convenience sample of 82 patients at 2 large clinics in the western U.S. We used conversation analytic (CA) methods to examine patterns of behavior when oncologists provided more than one treatment option to patients.

Results: In early-stage disease, OL provides patients with options while at the same time constraining those options through expression of physician bias. This effect disappears when cancer is at an advanced stage. In this context, OL is presented without physician preference and demonstrates recission of medical authority.

Conclusion: In early-stage contexts, OL functions as a way for physicians to array available options to patients while also communicating their expertise. In advanced-stage contexts, OL functions as a way to minimize treatment options and highlight dwindling possibilities.

Keywords

Oncology; conversation analysis; doctor-patient communication; decision-making

1. Introduction

The implementation of shared decision-making (SDM) provides many important benefits. It is linked to more patient engagement in care, less patient anxiety, and increased patient adherence[1–3]. SDM has promoted an ideal communicative mechanism for involving patients and providing them choices [4]. When the Patient Protection and Affordable Care Act (PPACA) was signed into law in 2010, SDM was among many of key reforms to the U.S. healthcare system [5]. In particular, SDM was included in protocols for the new Center for Medicare and Medicaid Innovation [6]. SDM also provides the benefit of cost reduction.

Consistently, as many as 20% of patients who participate in SDM choose less invasive surgical options and more conservative treatment than do patients who do not [7].

In oncology, involving patients in decision-making about treatment is a crucial aspect of effective care. Patients with cancer documented having more trust in their oncologist when they believed they had greater decision-making involvement and felt as though clinicians were responsive to their concerns [8]. Generally, it has been found that patients want to be knowledgeable of all available options, want to be involved in their own care decisions, and feel that their physicians know them beyond just their disease [9].

One way SDM can be implemented in decision-making is providing patients choices. Toerien et al. [10] term this process "option-listing" (OL), in which providers offer a "menu of choice" which includes more than one course of action, including the choice between doing something or nothing if only one option for treatment exists. It has been found that patients most effectively understand that they have a choice in treatment when physicians do OL [11]. Yet, Toerien et al.[10] argue that while OL can indeed be part of an SDM process, it does not necessarily mean that SDM is underway. Notably, the authors find it is possible for OL to communicate limited choice. In a pilot study of neurology recommendations, the authors conclude that OL actually constrained choices to patients through the conveyance of physician preference, ruling out certain options, and making a case for or against an option.

Charles et al. [12] have argued that successful implementation of SDM involves the communication of both physician and patient preferences. Further, in revisiting their original paper on SDM, the authors also put forth, "For a shared model to work, both physicians and patients have to perceive that there are treatment choices" [12]. The authors also argue that physician expertise is an important part of that process, and physicians may indeed feel a medical obliation to communicate this. In considering how choices get presented, Toerien et al.'s pilot study finds that when physicians communicate their preferences while providing options they could be constraining options despite using the "machinery" of choice [10]. The degree to which physicians should balance what they believe to be the best path forward while at the same time ensuring patient involvement in decision-making remains a complex issue [13]. In analyzing OL in a different clinical context—oncology—we propose a pilot study further exploring this tension underlying the listing of treatment options. The aim of this study is to detail how options are presented to patients in different stages of cancer treatment and to what degree oncologists' preferences get communicated.

2. Methods

Data come from 90 video-recorded oncology consultations. Data collection occurred at two teaching hospitals in the western U.S between 2014 and 2017. Five oncologists were drawn from a convenience sample and represent two subspecialties, gynecologic and urologic oncology. All research activities were IRB-approved and all recorded parties (e.g., patients, physicians, nurses and family members) provided written, informed consent.

In analyzing and transcribing these data, we used a conversation analytic (CA) approach [14, Appendix A]. CA serves as an important methodology for analyzing patterns in interaction

which can then be shown to be ordered and systematic in usage [15]. This can provide robust evidence for the accomplishment of a social action in medicine (e.g., diagnosis, treatment recommendations). In analyzing medical interactions, scholars of CA have found there to be recurrent and patterned ways in which patients account for seeking acute care, patients present symptoms, physicians conduct physical exams, and physicians recommend treatment [16–20]. We identified 68 recommendations for treatment. Of these, providing more than one option for treatment, or option-listing (OL), occurred in 10% of cases (n=7). In 4 cases, patients had newly-diagnosed pre-cancer or borderline cancer and had not yet begun treatment. In 3 cases, patients had existing, late-stage metastatic cancer and treatment was being re-assessed.

3. Results

3.1 Option-listing in initial treatment context

Oncologists approached option-listing in two distinct ways depending on two variables: the patient's stage in treatment (initial treatment for a new problem vs. continuing treatment for an existing problem) and whether standard treatment options remained. When patients had not yet begun initial treatment and standard treatment options remained, we found that while a menu of options was presented, physicians revealed one treatment as more desirable. An instance of this is shown in Extract (1). In this encounter, a gynecologic oncology patient, who presented with pre-cancerous lesions on her labia, sits down with her oncologist in his office following a physical examination of the lesions. OL begins in (1a). Here, the physician begins to discuss the goals of the treatment with the patient, which are to remove not only the abnormal lesion, but beyond it, into the "margins" (lines 01–02). He accounts for this in lines 03–05, where he states that if the margins are not also removed, the lesion could grow back and become cancer. He continues that removing the whole lesion is important to avoid cancer (line 07–08) and then recommends "some type of treatment" (lines 08–09) for the lesion.

(1a)0206b

01	DOC:	Usually we like to get negative margins (.) Meaning that we'd
02		want to see healthy tissue beyond where the abnormal lesion was
03		to ensure that we've removed the whole abnormal lesion. The
04		theory being that if you leave some of that behind it may grow
05		over time and become a cancer.
06	PAT:	[Okay,
07	DOC:	[Mokay, so with the goal of removing the whole abnormal
08		lesion before it becomes a cancer I would recommend some
09		type of treatment. Again the treatments would be um (.)

The transcript continues as the physician moves on to list three different treatment options by doing OL. He first provides the option of surgically removing the lesions:

(1b)0206b

01	DOC:	type of treatment. Again, the treatments would be um (.)
02		doing a small procedure where you kind of come and go home the
03		same day where we just excise those areas? [en put some sutures
04	PAT:	[Mhm,
05	DOC:	in just to keep the area- h- to heal it well?

The first option is framed as one of a set when the physician prefaces it in line 01 with: “Again the treatments would be um(.)” before he produces the option itself, an outpatient surgical procedure: “doing a small procedure where you kind of come and go home the same day where we just excise those areas en put some sutures in” (lines 02–03). The “just” in this line is used to minimize the excision itself. Then he moves on to discuss the healing: “en put some sutures in just to keep the area- h- to heal it well?” (lines 03 & 05). In this case, the “just” in line 05 downgrades the inclusion of the sutures and frames the sutures as only there to help “heal it well”.

Following this option, the physician moves to the next two treatment options. The next option offered is to use a laser and burn the area of concern (lines 01–02). The use of “ablate” and “burn” as central to treatment are negative and medically weighty terms to use. Next, the physician produces the third treatment option, “to use some topical cream” (line 02), which, in the context of treating pre-cancerous tumors, may sound like it is inappropriately mild given a

(1c)0206b

01	DOC:	Another option would be to use a laser and ablate meaning
02		burn that area, Um: or to use some topical cream. I don’t
03		necessarily recommend the topical cream for you because you
04		only have two little areas that look involved? en that’s kind of
05		a (.) quite a long process that’s twelve weeks of kinda (.)
06		shmearing this cream over the (.) outside of your vagina: like

diagnosis of pre-cancerous tumors. It is also inconvenient, as the physician notes in lines 04–05, “en that’s kind of a (.) quite a long process that’s twelve weeks of kinda (.) shmearing this cream over the (.) outside of your vagina:” He also plainly frames this option as undesirable in his medical opinion when he states that he does not “necessarily recommend the topical cream” (lines 01–02). After more discussion of side effects of the cream, the physician includes which option he recommends:

(1d)0206b

01	DOC:	Um but I think (.) the: I think it’d be very reasonable just to
02		do uh little wide local excision of those two areas? en just-
03		remove them and hopefully (.) be done with it.
04	PAT:	That works,

While the physician has revealed a preference in favor of one option earlier, it becomes explicit when he states, “I think (.) the: I think it’d be very reasonable just to do uh little wide local excision of those two areas?”(lines 01–02) and this is partially accounted for through the insinuation of the rapidity and the finality of the procedure: that the patient could “hopefully (.) be done with it.” (line 03) rather than having to undergo the twelve weeks of applying cream. Immediately following his revelation of preference towards the first option, the patient shows acceptance of this route (line 04): “that works,”. Not only does the physician orient to a treatment as more desirable and the patient accepts, but the patient next asks the physician what she should do:

(1e)0206b		
01	DOC:	Um. (0.2) okay (.) if tha-if you’re ame[nable,
02	PAT:	[If (0.2) yeah I mean
03		what do you think is best?
04	DOC:	I think-I think e I think the straightforward thing is just
05		to do the little excision of each .hh and then just be done with
06		it.

The physician confirms the patient’s acceptance of the treatment (line 01). Yet, in the context of the physician placing the decision in the patient’s domain, “If you’re amenable” (line 01) the patient requests the physician’s advice (lines 02–03). In so doing, she pushes back on the terms of the decision, shifting it to a decision based on what the physician thinks is best, rather than one based on her preference. The physician responds with the same desirable option, that the excision is best (lines 04–06). In this context of a set of options, the patient explicitly elicits her oncologist’s medical advice.

Relevant in this OL example is the patients’ non-malignant, non-metastatic disease, that standard options remain to treat, and options are presented in the context of pursuing initial treatment. Also notable is the framing of options. In the context of the first, the other two options are given less description and are presented as either painful and unpleasant (e.g., burning the area) or mild and inconvenient (e.g, a cream for three months). The first option is presented as neither of these things: it is minimal and convenient. Further, the physician explicitly treats one option as more desirable and the patient demonstrates a desire for his medical input. Both physician and patient look to medical authority as the arbiter. Thus, although three options are given, one is presented as more desirable. This case suggests that option-listing may function as a way to persuade a patient towards the best treatment given all possible treatments.

As in Extract (1), patients can explicitly ask physicians what they think is best, suggesting patient preference for medical expertise when choides are provided. However, the following excerpt shows this is not always the case. In this encounter, a 29-year-old female patient has been recently diagnosed with high grade dysplasia on her cervix. She and her gynecologic oncologist are discussing a treatment plan. In Extract (2a), the oncologist presents two options to the patient for removing the pre-cancerous cells, either a LEEP or a cone procedure:

(2a)0120

01	DOC:	So the part that they biopsied is out here.((points to picture))
02	PAT:	Yeah.
03	DOC:	Okay, so- (0.2) what we would recommend is (.) cutting this
04		((points to picture)) off. So you can do it in one way- (.) You
05		can do a leep procedure? Which is with a electrified loop?
06		[and it literally just shaves it off like this.((moves pen))
07	PAT:	[Yeah.
08	DOC:	Or you could do something called a cone procedure
09		which is where we use a scalpel and instead of shaving? we:
10		cut. (.) Like this, ((moves pen))
11	PAT:	Mhm,

The oncologist enters into the recommendation in line 03, where she invokes the institutional “we” to propose an excisional treatment plan, “what we would recommend is (.) cutting this off.” She then moves to the first option, a LEEP (Loop Electrosurgical Excision Procedure), which she explains uses an “electrified loop”. She expands on the details of this, where she demonstrates the procedure using a pen over an illustration of gynecologic organs while explaining “and it literally just shaves it off like this.” (line 06). The use of the word “just”, similar to its use in Extract (1), serves to minimize the procedure, which initially was presented as using an electrified instrument which could be perceived as intense or severe. Further, the physician specifies that this procedure, originally framed as “cutting”, is in fact a procedure that “shaves it off” (line 06), which— relative to cutting—serves to minimize the severity of this option. She then moves to the next option, “Or you could do something called a cone procedure which is where we use a scalpel and instead of shaving? we: cut.” (line 08). The framing of this option relative to the first, that the procedure involves cutting by scalpel rather than shaving, is presented as a more invasive surgery through the use of “scalpel” and “cut”. Recall that the first option was presented as “just” shaving the area off, which is milder in contrast. The physician continues with more details of each procedure in (2b):

(2b)0120

01	DOC:	scalpel and instead of shaving? we: cut. (.) Like this.
02	PAT:	M[hm,
03	DOC:	[Okay, there’s advantages and disadvantages to both.
04		For the type of le- (.) For the type of thing that you: have
05		based on your slides? we would probably recommend doing
06		this ((points to LEEP picture)) rather than this. ((points on image))
07		We save the cone for when we- when the (.) biopsy
08	DOC:	results are bad up in here? [and we need to get here? when
09	PAT:	[Mhm.
10	DOC:	things are (.) surface problems? We can actually take
11		less cervix?

Here, the physician begins to discuss the “advantages and disadvantages to both” (line 03). Yet, rather than laying out the affordances and trade-offs of each procedure, she reveals an explicit preference for one procedure over the other. Next, she explains that based on the patient’s slides, “we would probably recommend doing this ((points to LEEP picture)) rather than this.” (line 05–06). The physician treats this option as more desirable. She next accounts for why she recommends the LEEP by detailing that the cone procedure is better suited for instances where the biopsy results are “bad” further inside the cervix (lines 06–08). She then tells the patient that removing less cervix is appropriate when the issue involves “surface problems” (line 10). Her advocacy for the LEEP continues in (2c):

(2c)0120

01	DOC:	actually, .hh take less cervix? (.) you know but get good
02		result.
03	PAT:	Got[cha.
04	DOC:	[The- (.) we don’t wanna take a lot,
05	PAT:	I un[derstand I’ve read everything online,
06	DOC:	[You need your cervix.

She explains that the LEEP procedure allows them to take less cervix but, in spite of this, still get good results (lines 01–02). The physician subsequently provides an account for the first option, “we don’t wanna take a lot,” (line 04). The patient responds that she understands this, and provides an account for her understanding, that she has read the information online (line 05). The physician continues to reveal her preference towards taking less cervix with an assertion that the patient needs her cervix (line 06).

In this instance of option-listing, two options are presented to treat the patient’s high-grade dysplasia. Both of these options are surgical excisional procedures: a LEEP procedure and a cone procedure. Initially, the physician frames the LEEP procedure as minimally invasive relative to the cone procedure by focusing on the instruments used to remove the area (a loop versus a scalpel) and the manner used to remove the area (shaving versus cutting). In the framing of each, the physician implicitly reveals a preference for the LEEP procedure through minimizing its severity. The physician indeed explicitly reveals a preference for the LEEP procedure over the cone procedure and continues to account for the LEEP procedure as preferable. She does this by communicating evidence from patient’s biopsy results: the preference of removing less cervix, and the importance of an intact cervix. In these ways this encounter is similar to the first: the physician first orients to one option as more desirable in the framing of the options and then explicitly recommends one option. However, this instance of option listing does not include the patient soliciting the physician for her opinion as in the first. This suggests that patients do not always need the physicians to explicitly tell them which option to pursue for them to align with the physician’s preferred treatment course. Yet, what is similar across both cases is that persuasion takes a particular form: the discussion of the less desirable option works to bolster the reasonableness of the other, more desirable option.

In contexts where initial treatment is being discussed and standard options for treatment remain, physicians treat one option as more desirable. This is apparent both in the framing of the treatment and subsequently made explicit by the physician. This result suggests that when initial treatment plans are discussed, multiple options for cancer treatment can exist and when they do, each option gets presented. Further, physicians appear to default to their medical expertise by working to advocate for the option which they believe to be best in this context, arguably a central facet of SDM. Out of 7 instances of OL, 4 cases occurred in the context of initial treatment and 3 in the context of an ineffective treatment that is being revisited. In this latter context to which we now turn, all encounters involved the provision of options *without* any revelation of preference—implicit or explicit—for one treatment option over others.

3.2 Option-listing in the context of ineffective treatment

We find that the context in which options are given without physician preference is when the patient's existing treatment has been found to be ineffective and the physician is revisiting the treatment plan with the patient. We suggest that, perhaps counterintuitively, giving the patient a "menu of choice" without an implicit or explicit recommendation for one path forward may suggest minimal hope for cure or maintenance of the disease, clinically bad news. Maynard argues that physicians use one of three interactional strategies for delivering bad news: forecasting, stalling, and being blunt [21]. While Maynard argues that stalling avoids the delivery of bad news altogether and being blunt is a straightforward telling of the bad news, forecasting—in contrast—coaxes patients towards realizing the bad news on their own. This tactic, Maynard argues, "fosters realization through giving advance indications of bad news in a way that allows recipients an opportunity to estimate or calculate the news in advance" [21]. It thus follows that OL in a context where standard treatments have failed could help trigger patients' awareness of the diminishing possibilities of disease remission. In the ensuing analysis, we explore this possibility.

In the following encounter, a urologic oncologist has just finished telling a patient with advanced prostate cancer that while he clinically looks good, his scans are showing further bone metastasis of the cancer and that the current treatment is no longer effective in treating the disease. In contrast to the previous patients' clinical circumstances, this patient has disease that is not currently under control. In Extract 3a, the physician enters the treatment recommendation by listing options to the patient:

(3a)0413		
01	DOC:	there are whater- what are the standard options that
02		are left there's (0.2) kind of (0.8) There's kinda
03		two: that one could consider: ok,

The physician indicates that he is shifting into making a treatment recommendation by beginning a discussion of the standard options that are "left" (lines 01–02). The use of the word "left" is significant, because any options to follow are options occasioned by the inefficacy of the current treatment. He continues to say that "there's kinda two:" options

(lines 02–03), where “kinda” alludes to other options which may be a variation of the standard treatment or less desirable. The physician moves to the first option, Jevtana, which is portrayed as one of two “standard options” remaining (line 03). We learn that this is a chemotherapy drug from the physician’s response to the patient’s inability to hear, where he leans closer to the physician (line 04). Subsequently, this option gets major resistance from the patient [22]. He gets emotional and begins crying when he reflects on his last experience with a chemotherapy drug similar to Jevtana, Taxotere. Amidst this resistance, the physician offers the second option.

(3b)0413

01	DOC:	there are whater- what are the standard options that
02		are left there’s (0.2) kind of (0.8) There’s kinda
03		two: that one could consider: ok,
04	PAT:	((scrunches face, then leans in with one ear close to DOC))
05	DOC:	Jevtana?
06	PAT:	((glances up confused))
07	DOC:	Chemo.
08	DAU:	Jevtana,
09	PAT:	O:h Jevtana.

The second option, offered in Extract (3c), is presented to the patient after an extended discussion about the patient’s demonstrated concern for the side effects and efficacy of the Jevtana:

(3c)0413

01	DOC:	So lemme say- if you said gimme another option besides
02		that chemotherapy, there is another one that’s a little more
03		ge:ntle? (0.6) it’s something that’s called Midoxantrone en
04		it’s an old dru:g, (.) ok but it’s still chemo ok, (.) but that’s
05		not the only option you can look it u:p it’s the- one of the
06		first chemotherapies approved for prostate cancer.

While it may seem like this is the second of the two options initially presented in Extract 3a, this option is provided as an alternate to the first option (lines 01–03). It is produced amidst substantial resistance to the first option as the patient begins to cry upon recalling his prior experience with chemotherapy and its side effects. This second option, the chemotherapy drug Midoxantrone, is framed as a gentler version of the Jevtana (line 03). The physician reminds the patient that this treatment is still chemo (line 04), perhaps insinuating that the concerns the patient had about the first chemo option could still be present here. He also frames the drug as “old” (line 04), which, in an area of constant treatment innovations and research, serves to minimize this option. After no agreement from the patient, a third option is provided to the patient— one that is *not* a chemotherapy drug:

(3d)0413

01	DOC:	Okay, but if you said well okay you're still talkin
02		chemo gimme: gimme something else that's not chemo what
03		haven't I tried yet (.) that is reasonable that I could- that I
04		could still do, (.) So one thing that we haven't- we haven't
05		gone through yet, (0.4) u:m that's not experimental, (0.4)
06		is estrogen therapy?

This third option, for estrogen therapy, was likely the second of the two options initially presented in (3a). In a preamble leading up to the presentation of the estrogen treatment itself, the physician indexes this option as "reasonable" (line 03) and "not experimental" (line 05). Once he offers this option, the patient asks about whether it will make his neuropathy worse. It is at this point that the physician includes an argument *against* going with the Jevtana option. This is shown in Extract (3e). In contrast to the first two instances of option-listing, the physician does not explicitly offer his opinion *for* or *against* this drug- he only offers its negative side effects as

(3e)0413

01	DOC:	Yiknow your nerves are beat up,
02	PAT:	Uh huh,
03	DOC:	En that would be a disincentive for the Jevtana, (.) cuz I think
04		that could actually (0.2) carry further with the numbness thing.
05	PAT:	Eh-the so the Jevtana a disincentive?
06	DOC:	Yeah, it could actually make that worse.
07	PAT:	((Sighs))
08	DAU:	Neuropathy could get worse with the Jevtana.

a "disincentive" (line 05). Subsequently, the physician does the same with the estrogen option He presents the positive and negative aspects of this treatment route in lieu of an explicit path forward (3f). The physician establishes that the estrogen may be a good treatment to pursue because it can reduce hot flashes (lines 01–03). Yet, next he moves right to a "troubling" side effect of this option in lines 05–06, breast growth. Subsequently, the physician includes that these drugs are "feminizing hormones" (lines 08–09), also likely a negative side effect for this male patient.

(3f)0413

01	DOC:	Yep. okay? So- yiknow estrogens especially if you have
02		patch may actually be kind of an attractive option, reduces hot
03		flashes, en the-
04	PAT:	Well that'd be nice.
05	DOC:	Burt w- uh- side effect that- it can be a little troubling is
06		breast growth.
07	PAT:	Is what?

08	DOC:	Breast growth. (0.2) They're estrogens, (0.2) They're feminizing
09		hormones.

Up until this point, the patient has been told that his bone scans show the disease spreading, a sign of ineffective treatment. The physician follows up this clinically bad outcome through OL. He presents the choices that are "left", and that there are "kinda" two options, signaling dwindling treatment possibilities and hedging on the number of options which remain. Next the physician lays out three options yet no indication is given to the patient of which option to pursue. The affordances of each option are minimized, while the "disincentives" for both chemotherapy and estrogen therapy are thoroughly laid out. Drawing on the earlier discussion of Maynard's work on bad news delivery, option-listing here could be functioning as a forecast to the patient in the form of "elaborate reports."[21] Laying out three options with no clear benefit in the context of the inefficacy of the current treatment could activate the patient's awareness of shrinking treatment possibilities.

There is also evidence for the physician framing the options as a brainstorm rather than a dedicated treatment recommendation. Evidence for this is shown in the addition of an option occasioned by the patient's adverse reaction to the first option. This is also indicated by the physician not demonstrating preference for one option over another and downplaying each as having a host of undesirable side effects. It is also possible that these behaviors were occasioned by the strong patient resistance demonstrated after the first option, and, in the absence of such resistance, each option may have been presented differently. In sum, we find that in an environment where the main treatments are ineffective and stopping treatment is not mentioned, there is evidence to indicate that physicians rely on OL and frame it a brainstorm or to forecast bad news.

4. Discussion and Conclusion

4.1 Discussion

This pilot study provides suggestive evidence demonstrating that a patient's disease and treatment stage impacts how physicians present treatment choices. In the first part of the analysis, we analyzed OL in the context of initial treatment where standard treatment options remained. The two cases analyzed underscore that while the "machinery" of choice is used by arraying more than one path forward in treatment, patients may well understand that they do not have a choice in the matter. This is evident through the presentation of physician preference towards what they believe to be more efficacious therapy when they list options. Preference towards a single best option is evident in two key ways: in the framing of the options through emphasizing only the favorable or unfavorable features of an option, and in the physicians' eventual explicit recommendation for a single best path forward. Patients may also actively solicit their physician's preferences. Recall that in the first extract, following the physician's explicit recommendation for one option, the patient defers to his expertise by asking him what he believes is the best option for her. The patient in Extract (2) does not defer to her oncologist in this way. Yet it appears that patients do align with their physician's preference as each patient in our analysis accepts physicians' preferred treatment option. This practice may also create an environment in which one treatment modality can

be justified through its contrast with a different modality on evidentiary grounds, what Peräkylä calls “accountability” in medical diagnosis and treatment [23].

Contrastively, when patients have advanced stage cancer and OL occurs in the context of the main treatment no longer working, physician bias is notably absent. In Extract (3), the physician includes both reasons for and against these treatment options. Yet, he does not explicitly do recommending, that is, he does not tell the patient what he *ought* to do, as is done in the initial treatment context. Further, the patient does not solicit the physician’s preferred course of action. In this context, OL may function as a foreshadowing of limited options because each option presented is heavily minimized and comes with no true benefit.

4.2 Conclusion

When physicians do OL for patients in initial treatment, they are skewing more often towards one preferred treatment route by mobilizing their medical expertise. While options are presented and patients appear to be given choices, we argue that patients may believe they do not truly have a choice when one option is presented as most effective. Yet, this finding shifts when the context of treatment and the stage of disease change. In instances when physicians have run out of standard options because the main treatment has been found to be ineffective in the context of advanced disease, we find that physicians do not orient to one treatment as more desirable and withhold their medical authority over the decision. This indicates that in the context of advanced disease, OL may function primarily as a brainstorm, perhaps helping to trigger patients’ awareness of the diminishing possibilities of disease remission.

4.3. Practice implications

The goal of this preliminary work is to advance our empirical understanding of how physicians involve patients in their own care while at the same time guiding them towards what they believe to be the best path forward in treatment. This analysis has offered evidence that, in a complex treatment environment, the context in which recommendations are made matters in how directive or collaborative physicians are with patients. What we found most notable was the rescission of medical authority when patients were out of standard treatment options. In this case, physicians appear to pull back on their authority over decisions and truly provide an equal framing of the remaining options, emphasizing the drawbacks of each option. This could indicate a forecasting strategy by coaxing the patient towards realizing that remaining treatments offer diminishing returns. We could speculate that an affordance of this is effective avoidance of bringing up something more problematic that signals end-of-life: palliative or hospice care. This contributes further evidence to the literature’s existing documentation of physician avoidance of end-of-life care discussions [24,25].

A foundation has been built to further explore how physicians present and negotiate their own expertise when patients are at different stages of treatment. Given this, we also recognize the limitations of the generalizable claims we can make due to this study’s small size. Because of the small sample size, we did not have patients with early stage cancer diagnoses in the initial treatment phase where multiple options for treatment were presented.

This study suggests an important phenomenon in recommending treatment and the provision of choice across different disease and treatment contexts, one which should be further explored using a larger, more representative sample size.

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APPENDIX A: CA Transcription Notations

?,.	**Punctuation** is designed to capture intonation, not grammar and should be used to describe intonation at the end of a word/sound at the end of a sentence or some other shorter unit. Use the symbols as follows: **Comma** is for slightly upward 'continuing' intonation; **Question mark** for marked upward intonation; and **Period** for falling intonation.
[	**Left-side brackets** indicate where overlapping talk begins.
]	**Right-side brackets** indicate where overlapping talk ends, or marks alignments within a continuing stream of overlapping talk.
(0.8)	**Numbers in parentheses** indicate periods of silence, in tenths of a second.
:::	**Colons** indicate a lengthening of the sound just preceding them, proportional to the number of colons.
becau-	**A hyphen** indicates an abrupt cut-off or self-interruption of the sound in progress indicated by the preceding letter(s) (the example here represents a self-interrupted "because").

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Practice Implications:

OL is one way to implement shared decision-making, but it can also be used to facilitate a realization that treatment choices are diminishing and disease is progressing beyond a cure.

Highlights

- Listing treatment choices, termed option-listing (OL) can facilitate SDM.
- In early disease, we find OL can constrain patient choice via physician preference.
- In advanced disease, we find options get presented without physician preference.
- OL can foster patient realization that options are diminishing beyond a cure.