Peace of Mind: A Role in Unnecessary Care?

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Consider this excerpt from a real patient-surgeon conversation about treatment for a small, early-stage thyroid cancer and deliberating three equivalent treatment options: active surveillance, hemithyroidectomy, and total thyroidectomy.

> **Patient**: What do you recommend on my case?
> **Surgeon**: I could probably argue any of the three. I think, what I'm hearing from you is that peace of mind is important…
> **Patient**: Yes.
> **Surgeon**: If we're going to go down the surgery path, I would probably recommend a total.
> **Patient**: Mmm hmm.
> **Surgeon**: Knowing that it will definitively get the entire thyroid out so hopefully should give us peace of mind.

Peace of mind is an anticipated emotional outcome that can strongly influence decision making and potentially act as a heuristic or mental shortcut. In patients with cancer, peace of mind is known to affect treatment decisions. However, the influence of peace of mind on clinician or oncologist decision making is rarely discussed or studied. In cancer care settings, peace of mind has the potential to be both a patient- and clinician-centered outcome. The complex interplay between patient and clinician peace of mind not only can provide an inherent emotional benefit to both parties but may also drive unnecessary care, such as overdiagnosis and overtreatment, and result in unwanted or adverse outcomes.

Patient-Centered Outcome

A cancer diagnosis triggers a strong emotional response in most patients, often characterized by fear and anxiety regardless of the prognosis or expected outcome.[1] However, the diagnostic period is also a time in which patients and clinicians make important treatment decisions with quality-of-life implications. These choices are often made under time pressures, owing to the cancer diagnosis itself. Often, peace of mind has a stronger influence on patient decision making than objective medical data or risk estimates.[2-5] One qualitative study on decision making regarding risk-reducing mastectomy demonstrated that participants were not guided by objective risk-benefit analysis, but rather fear reduction and protection from future regret.[4] Another study analyzed the perspectives of older women on treatment options for hormone receptor–positive breast cancer given the guidelines recommending against routine axillary staging with sentinel lymph node biopsy because the potential harms outweigh the potential benefits.[6] This study found that 40% of older women reported that they would proceed with sentinel lymph node biopsy despite evidence suggesting that omission is safe because of reassurance if negative: "I know for my daughter they did the lymph node test, so I was glad for that because then she had peace of mind that nothing had spread. That's what I would like, peace of mind on that."[6] Peace of mind has also been implicated as a key patient-centered outcome driving the increased utilization of contralateral prophylactic mastectomy (CPM),[7] a procedure that offers no survival benefit.[8-10] A study of surgical decision making demonstrated that less knowledge about breast cancer and greater worry predicted patient interest in CPM, suggesting that in many cases, the decision for CPM is rooted in peace of mind.[11]

Emotional responses toward cancer and the need for peace of mind can also influence detection and screening practices. For example, a participant in a recent study by our group explained when insisting on having a biopsy of an almost certainly benign schwannoma in a high-risk area that "just for my peace of mind, I really want this biopsied." In the prostate cancer literature, a study of men who were deciding to get a prostate-specific antigen (PSA) screening test reported that most men had already made up their minds to do something to alleviate their concerns about prostate cancer before seeing a clinician and this was unaltered by the information provided by their clinician.[12] "If it's 80% reliable, that 80% could be my life. And to be honest I had already made up my mind that I would [have the test]."[12] Shared decision making before PSA-based screening has been recommended by the US Preventative Task Force for men age 55-69 years.[13] However, if many patients are making an emotion-based decision on screening before the

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clinical visit, then shared decision-making guidelines may not be effective. In fact, after the US Preventative Task Force recommendation, although receipt of shared decision making increased, no changes were observed in routine PSA screening rates.[13]

Clinician-Centered Outcome

The decision for cancer screening or treatment can also be influenced by the clinician's own beliefs and emotions about the disease, including peace of mind. In a recently published study, a clinician was quoted as saying, "The biggest barrier is my own anxiety…that anxiety is matched by my patients…It comes from being in a culture where cancer is bad and needs to get out."[14] Clinicians often have to make important decisions in a fast-paced environment, which can result in reliance on affect-based heuristics and the introduction of biases.[15,16] Furthermore, emotional transference can also occur from the patient to the clinician and vice versa. Patients' emotional responses and need for peace of mind can be shifted onto clinicians; the impact of this emotional transfer on clinical decision making has not been fully studied and needs to be considered.[17]

Although emotion and peace of mind can influence clinician decision making, they can also result in an unconsciously biased presentation of treatment options to the patient. Information presented in such a way may compound the fact that patients have been shown to minimize the risks of treatment and overestimate the risks of the disease.[2,3] This process may also lead to treatment choices that do not necessarily align with patients' preferences and values.[5] Although there are many benefits to shared decision making, the process can also be fraught with the risk of cognitive biases that result from how information is presented to patients.[18] Risky choice and attribute framing, relative versus absolute risk presentation, and default and optimism bias can all affect how patients react to the information that is presented.[18] Among patients influenced by peace of mind during the decision-making process, some may allow this anticipated emotional outcome to bias information, leading to misperceptions, whereas others may be completely aware of the actual risks and choose more extensive treatment because it provides them with peace of mind. To avoid potential adverse effects of peace of mind–related decision making and associated misperceptions, clinicians must be aware of how they present information and ensure that patients' awareness and knowledge of the risks are accurate.

Costs and Benefits of Peace of Mind

Peace of mind–related decision making is not without consequence (Table 1). The overdiagnosis and overtreatment of thyroid cancer have resulted in an accelerating rate of total thyroidectomies relative to lobectomies for small papillary cancers in the past decade despite evidence showing no difference in survival.[28] The risks of unnecessary total thyroidectomy include recurrent laryngeal nerve damage, resulting in permanent voice change, hypoparathyroidism, and need for chronic thyroid hormone replacement.[28] For patients with average-risk breast cancer, CPM is not associated with a survival advantage, but is associated with surgical site complications, permanent chest wall numbness, and potential delay of adjuvant therapy if surgical complications occur. In addition, 20%-30% of women report postsurgical dissatisfaction with cosmesis, body image, and sexuality.[21] Nevertheless, rates of CPM continue to increase in the average-risk population.[29]

It is important to acknowledge that despite treatment risks, there can be benefits to choosing more extensive treatment over less extensive treatment. Patients may choose more extensive treatment for reasons other than peace of mind. For example, patients may be motivated to pursue CPM for body habitus and symmetry advantages and a desire to avoid the need for mammographic surveillance.[30] Limited data exist as to whether decision making driven by peace of mind is associated with reductions in decisional regret or a sustained emotional benefit. In the thyroid literature, a survey of patients with differentiated thyroid cancer demonstrated that patients who had a total thyroidectomy were 1.5 times more likely to report a health-related quality-of-life issue than those who underwent a lobectomy.[31] When evaluating quality of life among active surveillance thyroid patients compared with those who undergo surgical intervention, a qualitative study suggested similar levels of cancer worry between the two groups,[32] whereas a cross-sectional study reported more health-related problems in the lobectomy group compared with the active surveillance group.[33] In a longitudinal prospective study of the psychosocial outcomes of women having CPM, cancer worry was higher preoperatively in those who underwent CPM, but then decreased after surgery to the same level as those who did not undergo CPM.[22] However, overall quality of life declined in those who underwent CPM and was lower than that in patients who did not undergo CPM. This finding suggests that decision making influenced by peace of mind may provide a sustained emotional benefit, but may carry other unanticipated adverse effects. Conversely, other studies have shown that breast-related quality of life remained high among both CPM patients and those who did not undergo CPM.[34] These mixed results suggest that treatment decision making remains a very patient-centered and patient-specific outcome.

Recommendations

Strategies to help address the influence of peace of mind on patient decision making include slowing down the treatment planning and decision-making process, using third-party information navigators, and the incorporation of decision aids, which have been shown to decrease decisional conflict and improve satisfaction with decision making.[35,36] Although decision aids have been shown to effectively improve patient-centered outcomes related to the decision and result in a higher proportion of people with accurate

TABLE 1. Examples of Overdiagnosis and Overtreatment Guided by Need for Peace of Mind

Malignancy	Guidelines	Peace of Mind Example
Breast cancer	Omission of SLNB and postlumpectomy radiotherapy in elderly women with hormone receptor–positive breast cancer[19]	The most important factors influencing decision making were trust in their provider and a desire for peace of mind: "I wanted to know if it had spread or not, and the risk of it spreading, I wanted to know"[20]
	CPM should be discouraged in average-risk women with unilateral breast cancer[21]	Before surgery, women who elected to have CPM had high levels of cancer distress ($P = .04$), cancer worry ($P < .001$), and body image distress ($P < .001$) than those who did not[22]
Ovarian cancer	Recommendation against screening for women with no family history of ovarian cancer	15.1% of women were screened despite the guideline recommendation; this was primarily motivated by patient desire for reassurance and peace of mind (93.1%) Providers reported being primarily motivated by patient requests (20.7%), improved patient outcomes (16.4%), and patient peace of mind (13.8%)[23]
Thyroid cancer	Recommendation against screening asymptomatic patients	Even patients with indeterminate thyroid nodules have an emotional get it out reaction: "just, I gotta get this out of there… just yank it out"[3]
	Active surveillance or hemithyroidectomy for very low-risk papillary thyroid cancer, recommending against total thyroidectomy	76.7% of clinicians believed that patients are influenced quite a bit or a great deal by peace of mind from surgery Clinicians who recommended total thyroidectomy were more likely to believe that patients are influenced by peace of mind from surgery (81.3% *v* 71.0%; $P = .02$) and had decreased odds of recommending active surveillance (OR, 0.49; 95% CI, 0.24 to 0.97)[24]
Prostate cancer	Recommendation against screening for men age ≥ 70 years	65% of older adults surveyed had a high intention of continuing screening despite being given a recommendation to stop screening: "I think it is better to know if there is something showing up and should or should not be treated"; "very important to be on the safe side"[25]
	Active surveillance is a treatment option for low-risk prostate cancer[26]	The principal reason for selecting active treatment over surveillance was the desire for cure and wanting to remove the cancer from their body, after their *gut reaction to cut it out*[27]

Abbreviations: CPM, contralateral prophylactic mastectomy; OR, odds ratio; SLNB, sentinel lymph node biopsy.

risk perceptions, many do not alter the treatment decision.[37] One reason postulated to account for this discrepancy is the lack of decision aids attending to emotion-related outcomes like peace of mind.[38,39] Slowing down the pace of the treatment planning and decision-making process may help with patient risk-benefit analysis. A study of decision making demonstrated that under time pressure conditions, participants were more likely to have an inverse relationship between risk and benefit judgements, suggesting that time pressure results in a reliance of affective or emotionally based heuristics.[40] The incorporation of patient navigators has been proposed as a strategy to provide information in a more neutral manner and help slow down the decision-making process.[18,41,42] However, further research is needed to understand how patient navigators affect biasing of treatment decision making.

On the clinician side, cognitive debiasing strategies and more training in empathic communication and risk communication techniques may be effective in decreasing the potential negative influence of peace of mind. The implementation of debiasing strategies requires critical thinking and an awareness of biases and their influence on decision making.[16] Further education is needed during medical training to improve clinician awareness of biases and how they affect one's thinking.[16] The broad usefulness of debiasing strategies has been debated; however, Ludolph and Schulz[43] conducted a systematic review of health-related debiasing strategies and found that most interventions were at least partially effective. Some strategies reviewed included cognitive strategies, such as educational training to raise awareness and improve knowledge about cognitive biases and asking people to elaborate on their decision making, and technological debiasing strategies, such as use of a decision aid, risk representation with visual aids, and manipulation of a search engine to ensure presentation of balanced information. Clinician training in empathic communication and risk communication techniques can help them navigate treatment decision conversations with patients in the setting of intense emotions for both parties. A study of hospitalized patients demonstrated that empathic communication resulted in less patient anxiety and higher ratings of communication by patients.[44] Although all these strategies have been demonstrated to be efficacious, implementation of these strategies and scaling up these interventions remains a challenge.

In conclusion, ultimately, clinicians have a responsibility to do no harm while also respecting patients' autonomy and right to make their own health care decisions. Part of the art of medicine is guiding shared decision making to support

patients in making goal-concordant decisions. In this process, clinicians must be aware that patient's preferences are sensitive to how options are framed. To support clinicians in this effort, improved education is greatly needed on cognitive and technological debiasing strategies, empathic communication skills, and risk communication. Such interventions can facilitate optimal shared decision making, while avoiding overdiagnosis and overtreatment.

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