

**CASE AND COMMENTARY: PEER-REVIEWED ARTICLE**

**Who Should Decide When Palliative Surgery Is Justifiable?**

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**Abstract**

No one person has the right or ability to make decisions about to whom or according to which criteria palliative surgery should be offered. Instead, patient and surgeon together must consider symptom severity, goals of care, and the value palliative surgery could add to the patient's health experience or quality of life.

**Case**

Mr J had a slow-growing facial tumor, which had rendered him essentially housebound: the tumor was fungating, rotting from the inside out, and causing a terrible odor and unrelenting pain. He was becoming increasingly unable to go out in public. His doctors had told him that the tumor could not be removed in its entirety due to its involvement of his carotid artery and the proximity of the tumor to his brain; cure, therefore, was impossible. Nevertheless, at each clinic visit, Mr J pressed his surgeon, Dr G, to cut out as much of the tumor as he safely could. Mr J had already undergone maximal “noninvasive” therapy with radiation, but the tumor continued to grow. Eventually, he was told that the tumor would kill him—by eroding a major vessel and causing a life-ending bleed or by compressing his brainstem and causing him to stop breathing—but that the tumor's growth was slow and nobody could tell him how much time he had left.

Every few weeks, Mr J was hospitalized for pain or bleeding from the tumor, and each time he saw Dr G, he was more and more depressed. This time, he was at his wit's end, all but begging for surgery. “Please,” he said, “All I want is to visit my mother before I die. She cannot travel. I can't get on a plane like this. Please, please take the tumor away. Please help me.”

Dr G was troubled. Mr J was in a terrible state, and there was a real possibility that surgery would make his condition worse. To help his pain and the appearance of his wound, surgery would require debulking of the tumor and then covering the wound with a free flap—harvesting skin, an artery, and a vein from a healthy area of the body in order to cover the hole caused by the resection. In the best-case scenario, the case would take at least 8 hours in the operating room, and the patient would require at least a 7-day hospitalization thereafter for monitoring and rehabilitation—if there were no unforeseen complications. Worse, there was no guarantee that the surgical wound would heal—the free flap would essentially be lying on a bed of tumor. There was scant medical literature on the subject, and any predictions for success or failure were

basically guesswork. But if Mr J survived the operation and if the wound healed, there was a chance that he would be able to achieve his goal of flying to say goodbye to his mother. Surgery was a lot of investment for a lot of uncertainty.

After many frank conversations with Mr J, Dr G felt that his duty to help Mr J outweighed the risks of the surgery and that Mr J understood the risks of the procedure and wanted to proceed. Dr G decided to offer surgery. Dr G's colleague, Dr N, learned about the operation and could not hide his dismay: "You're going to do a free flap on that patient? Do you know how much that will cost the hospital? Will his insurance even pay for it? And what about the patients that have curable disease whose care you're postponing in order to care for him? What if he never gets out of the hospital? You are making a big mistake."

### Commentary

Clinicians should offer interventions within the spectrum of safe and indicated options that neither harm patients nor violate their autonomy.<sup>1,2</sup> Shared decision making, however, is limited by patients' understanding of their condition and the limitations of their treatment options. If a patient with decision-making capacity insists on a treatment that is neither safe nor indicated, a clinician must refuse to provide the requested treatment.<sup>2,3</sup> Conversely, when a patient with decision-making capacity refuses treatment, a clinician must respect the patient's autonomy and cannot force a treatment on that patient.<sup>2,4</sup>

These decisions are commonplace and fairly straightforward, as they represent extremes of the spectrum. Decision making becomes more challenging when options fall somewhere in between. Furthermore, defining what is safe is influenced by what degree of risk the patient and clinician are willing to accept.

Palliative surgery adds its own layer of complexity. The metrics that define successful outcomes often are more nuanced. Traditional measures, including overall survival and disease-free survival, become secondary to symptom control and quality of life.<sup>5,6</sup> Moreover, patients receiving end-of-life palliative care require highly individualized treatment plans to address complex disease processes. The choice of **appropriate palliative therapy** has become increasingly complex as the armamentarium of systemic therapies, minimally invasive surgeries, endoscopic procedures, and percutaneous interventions for supportive care has expanded.<sup>7</sup>

### Determining Possible Impact

Given these advances, determining which procedures fall within the spectrum of indicated palliative intervention and thus should be offered to the patient is becoming increasingly challenging. Similarly, the degree of risk that patients at the end of life are willing to incur for a procedure they consider safe is variable and depends on their goals and preferences. It can be useful to simplify these complex situations by considering what option will have the largest positive impact.<sup>7</sup>

As we have noted elsewhere, the impact of a palliative procedure can be determined from its value, defined as the ratio of patient benefit to "cost to patient experience."<sup>7</sup> A high-value operation is one that offers a large potential benefit at minimal cost. The **value of a palliative procedure** is modulated by the anticipated length of duration of palliation. Patients who are expected to live longer can be expected to enjoy the benefits of an operation for a longer period, resulting in a higher value surgery. On the flip side, a

patient who dies the day after undergoing an operation that results in complete symptom resolution with minimal treatment toxicity and resource utilization extracts only minimal value from the surgery.

### Analysis

The concept of value should inform **decision making about palliative surgery**,<sup>7</sup> since it determines the spectrum of options presented to a patient and can help guide decision making. With this in mind, we now examine the case presented with respect to the patient's symptom severity and goals of care and the value to the patient of the proposed surgery.

*Symptom severity.* Mr J is pleading with Dr G to perform tumor debulking with free flap coverage. The patient is currently enduring pain, bleeding, and an unrelenting odor. He is essentially housebound because of his symptoms, which have resulted in repeated hospitalizations. Mr J is experiencing severe and pervasive symptoms, which, if palliated, could have a positive impact on his life.

*Goals of care.* The patient understands that his tumor will be fatal, and he wishes to be able to visit his mother. Presumably, Mr J also wishes to avoid additional hospitalizations. An operation that facilitates travel aligns with his goals, but a free flap, as discussed, would require extensive postoperative care and could require more operations to address complications. Furthermore, prior to surgery, it is imperative for Dr G to explain that, in a worst-case scenario, if a free flap fails, it's possible that Mr J's wound won't heal. This scenario would prevent Mr J from leaving his home, contrary to his stated goal of visiting his mother. Given that surgery could support or undermine Mr J's goals, a more comprehensive goals-of-care discussion is necessary to assess whether surgery would reasonably achieve his goals. Dr G should plainly state the surgical risks without false reassurance and clearly gauge Mr J's risk tolerance.

*Value of surgery.* The benefits of palliative surgery are symptom control and improved quality of life. In the best case scenario, an operation for Mr J would control his pain and bleeding. It would also debride necrotic tissue, mitigate odor, and make it easier for him to be in public. With these symptoms addressed, Mr J could probably travel, avoid hospitalizations, and improve his quality of life. His tumor is slow growing and, though his prognosis is unclear, Mr J has potential to live for months, so he would have time to enjoy benefits of his operation should he survive it and leave the hospital.

The costs of palliative surgery include treatment toxicity (eg, morbidity and mortality), duration of treatment (eg, length of stay, need for repeated interventions), and resource utilization. Which costs a patient is willing to incur is patient specific and often related to symptom severity.<sup>7</sup> Dr G has no data to determine morbidity, mortality, length of stay, or need for repeated interventions. This lack of data alone should give pause. Because Dr G cannot determine costs, the value and impact of surgery cannot be assessed relative to costs. One could, however, assume high levels of toxicity and a long treatment duration, using available data as a starting point.

Even assuming a long treatment duration, Dr N's concerns persist about resource utilization and its toll on the health care system and on other patients. However, in a resource-rich country like the United States, where operating rooms are utilized at 60% to 70% of capacity,<sup>8</sup> those concerns should probably not supersede patient autonomy. Rather, health care financing concerns should be addressed at a policy and population,

not a bedside, level. If Mr J could benefit from surgery that accords his goals of care and risk tolerance, Dr N should offer it.

### Conclusion

No single person should decide whether and when palliative surgery is justifiable. It is the surgeon's responsibility to share this decision, assess symptom severity, invite conversation about goals, and then offer high-value interventions based on a patient's needs and prognosis. It is patients' responsibility to assess their symptoms' tolerability and severity, their goals, and which risks and costs to accept. Based on collaborative discussion, surgeon and patient can determine what might constitute high value and positive impact in a specific case.

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**Editor's Note**

The case to which this commentary is a response was developed by the editorial staff.

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