



Colon/Rectum

Presented at the Academic Surgical Congress 2018

## Coping strategies among colorectal cancer patients undergoing surgery and the role of the surgeon in mitigating distress: A qualitative study ☆☆☆



Patient Experience

Jonathan S. Abelson, MD<sup>a,\*</sup>, Alanna Chait, MD<sup>b</sup>, Megan Johnson Shen, PhD<sup>c</sup>,  
Mary Charlson, MD<sup>d</sup>, Anna Dickerman, MD<sup>b</sup>, Heather Yeo, MDMHS<sup>a,e</sup>

<sup>a</sup> Department of Surgery, Weill Cornell Medicine, New York-Presbyterian Hospital, New York, NY

<sup>b</sup> Department of Psychiatry, Weill Cornell Medicine, New York-Presbyterian Hospital, New York, NY

<sup>c</sup> Department of Psychology, Weill Cornell Medicine, New York-Presbyterian Hospital, New York, NY

<sup>d</sup> Department of Integrative Medicine, Weill Cornell Medicine, New York-Presbyterian Hospital, New York, NY

<sup>e</sup> Department of Public Health, Weill Medical College of Cornell University, New York-Presbyterian Hospital, New York, NY

## ARTICLE INFO

## Article history:

Accepted 5 June 2018

Available online 11 October 2018

## ABSTRACT

**Background:** Distress is common among cancer patients and leads to worse postoperative outcomes. Surgeons are often the first physicians to have in-depth conversations with patients about a new colorectal cancer diagnosis; therefore, it is important that these surgeons understand how patients cope with the distress of a diagnosis and how they can help patients manage this distress.

**Methods:** Patients with colorectal cancer were recruited from an outpatient surgery clinic. Purposive sampling was used to recruit patients if they were either planning to undergo surgery or had undergone surgery within six months. In-depth, open-ended, individual qualitative interviews were performed. Grounded theory was used to develop themes regarding patients' coping strategies and beliefs regarding the role of the surgeon in helping them cope.

**Results:** Patients described their own internal coping strategies using problem-focused, emotion-focused, and meaning-focused techniques. Patients also reported the importance of their social support network for coping. Patients believed surgeons and their teams should help patients manage the emotional components of their cancer diagnosis and surgical experience, especially if patients were experiencing high levels of distress or had inadequate coping skills. They did not believe surgeons themselves should be primarily responsible for helping them cope.

**Conclusion:** In order for surgeons to guide diagnosis and initial management of distress in colorectal cancer patients undergoing surgery, they should screen patients for distress, identify and strengthen patients' own coping strategies, facilitate a strong social support network, and provide patients with the option to obtain further support from the surgeon's office.

© 2018 Published by Elsevier Inc.

## Introduction

Depression and anxiety—components of distress—are common among cancer patients and lead to worse postoperative outcomes, quality of life, and well-being.<sup>1–4</sup> As a result, both the National

Comprehensive Cancer Network and the American College of Surgeons Commission on Cancer mandate that new cancer patients be screened and treated for distress.<sup>5–7</sup>

Surgeons are often the first physicians to have in-depth conversations with patients about a new diagnosis of colorectal cancer; therefore, it is imperative that they understand how patients cope with the distress of a cancer diagnosis and what role they should have in managing distress. Understanding what tools these patients use to cope can also help clinicians determine what additional techniques could be used and how the surgeon's team can be involved. Little research, however, has examined what tools pa-

\* This study was supported by the Agency for Healthcare Research and Quality, NRSA T32-HS000066-23.

☆☆ Presented at the Academic Surgical Congress, January 30, 2018, Jacksonville, FL.

\* Corresponding author: Department of Surgery NYP–Weill Cornell Medical Center, 525 East 68th Street, Box 172, New York, NY, 10065. Tel.: (646) 962-2646; fax (212)746-8262.

E-mail address: [Jsa9004@med.cornell.edu](mailto:Jsa9004@med.cornell.edu) (J.S. Abelson).

tients with a new diagnosis of colorectal cancer use to cope with surgery and treatment.

To understand the breadth of coping mechanisms, we performed in-depth qualitative interviews using validated qualitative research methodology with patients who had recently been diagnosed or treated for resectable colorectal cancer with the aim of addressing the following 2 objectives: (1) understand the coping mechanisms used by colorectal cancer patients during their surgical treatment (preoperative, in-hospital recovery, and post-discharge recovery); and (2) understand the perceived role of the surgeon in helping patients cope.

## Methods

### Patient recruitment

Patients were recruited from Weill Cornell Surgery Department of Colorectal Surgery outpatient clinic, which included 5 board-certified colorectal surgeons, 1 of whom was also board-certified surgical oncologist. None of the surgeons received specific education on how to teach coping mechanisms to patients, nor was there a cancer nurse navigator during the study period. Patients were included if they had a diagnosis of colorectal cancer and were either planning to undergo surgery or had undergone surgery within 6 months. Patients were excluded if they had already undergone surgery or were not a candidate for surgery with curative intent. Purposive sampling was used to include both preoperative and postoperative patients. Additional efforts were made to ensure a representative patient population considering gender, race, and ethnicity. Institutional Review Board approval at Weill Cornell Medicine was obtained (#1508016507).

### Data collection

After consent was obtained, patients were given a series of patient-reported surveys measuring baseline functional level (Katz Activities of Daily Living<sup>8</sup>), presence of distress (Hospital Anxiety and Depression Scale<sup>9</sup>), quality of life (Euro Quality of Life–5 Dimensions–5 Levels<sup>10</sup>), and satisfaction with surgical care if they had undergone surgery (Consumer Assessment of Healthcare Providers and Systems Surgical Care Survey<sup>11</sup>). A chart review was also undertaken to obtain sociodemographic variables (age, race, ethnicity), presence of comorbidities, need for chemotherapy or radiation therapy, clinical or pathologic stage when available, postoperative duration of stay, need for readmission, and occurrence of surgical complication. All data were stored on a secure server called Clininvestigator (New York, NY).<sup>12</sup>

After completing patient-reported surveys, in-depth, open-ended, individual qualitative interviews were performed by a member of the research team (J.S.A.). J.S.A. is a general surgery resident who received specific training in conducting qualitative interviews as part of coursework toward completing a master's of science degree in clinical epidemiology. J.S.A. was also mentored closely by several coauthors (M.J.S., M.C., H.Y.) who have experience conducting qualitative interviews. A discussion guide with key questions and probes was used to query patients regarding their emotions in response to the cancer diagnosis and the surgical experience, as well as their beliefs regarding the role of the surgeon in helping them cope. Patients were recruited for interviews until no new information was obtained, defined as data saturation.<sup>13,14</sup>

### Data analysis

All interviews were audio recorded and transcribed by Ubiquis (New York, NY). Three researchers (J.S.A., A.C., H.L.Y.) used open

**Table 1**  
Cohort demographic characteristics.

Total cohort (N = 24)	n (%)
Age, mean (SD)	63 (13)
Female	16 (67)
Race	
White	18 (75)
Black	3 (13)
Asian	2 (8)
Other	1 (4)
Ethnicity	2 (8)
Hispanic	
Married	12 (50)
Stage*	
I	6 (25)
II	9 (38)
III	8 (33)
IV	1 (4)
Hospital Anxiety and Depression Scale	
Anxiety (0–21), mean	5.4 ± 3.6
Depression (0–21), mean	3.3 ± 2.5
Katz ADL (0–6), mean (SD)	5.8 (0.7)
S-CAHPS rating (0–10), mean (SD)	9.8 (0.6)
Charlson Comorbidity Index, mean (SD)	2.6 (1.2)
Stoma creation	5 (21)
Duration of stay, days, mean (SD)	7 (5.5)
Postoperative complications	2 (8)
Received chemotherapy	12 (50)

ADL, activities of daily living; S-CAHPS, Consumer Assessment of Healthcare Providers and Systems; SD, standard deviation.

\* Pathologic staging when available; otherwise clinical staging.

coding to independently code each transcript using Microsoft Word (Redmond, WA) and then met as a group to resolve any differences in coding. Themes were developed to create a unifying hypothesis to describe patients' coping strategies and the role of the surgeon in helping patients cope as described in constant comparative method of grounded theory methodology in qualitative research.<sup>15–17</sup> Data were entered into NVivo (QSR International Pty Ltd, Burlington, MA) to assist with analyzing transcripts. All transcripts were then re-reviewed by J.S.A. using NVivo to identify exemplary quotes to illustrate the meaning of each theme. Quotes not included in this manuscript were either redundant or not representative of the unifying themes generated through patient perspectives as recorded during interviews.

## Results

### Cohort description

A total of 28 patients were approached to participate in the research study after confirming they met inclusion criteria. Four of these patients were unable to be scheduled because of logistics, 3 of whom were men. Of the 24 patients enrolled in the study (response rate = 86%), the majority were women (67%) and self-identified as white (75%). Most interviews occurred during the postoperative period (62%). One patient had an abnormal screening score on the Hospital Anxiety and Depression Scale. The majority (88%) of participants were completely independent, and the mean overall health score was 76 out of 100. The average duration of stay among patients who underwent surgery was 7 days ( $\pm 5.5$  days) (Table 1).

Three major themes emerged from the data that described how patients with colorectal cancer cope throughout the surgical experience: (1) patient strategies for coping; (2) role of social support network; and (3) surgeons' role helping patients cope with distress.

### *Patient strategies for coping*

Patients described a variety of strategies they employed to help them cope; these belonged to 1 of 3 major themes: (1) problem focused, (2) emotion focused; and (3) meaning focused. Patients cited using these strategies throughout the surgical experience: during the preoperative period, during in-hospital recovery, and during postdischarge recovery. Each of these 3 themes is described in detail next and examples of quotes are displayed in [Table 2](#).

#### *Problem focused*

Problem-focused coping strategies include taking actions to explain or manage a source of distress.<sup>18–20</sup> It may include collecting information, making assessments, answering questions, or completing certain tasks based on the scenario. Patients described using a number of these strategies. For example, 1 patient who underwent stoma creation as part of her rectal cancer resection described how, to learn how to deal physically and emotionally with having a stoma, she “just went to the movie theater and said I don’t really need to empty the stoma bag but let’s just go do this.... Once you just face it and do what you need to do to deal with that fear, you can kind of put it to rest” [Participant 2]. This approach was used in patients with and without a stoma.

Many patients also reported that seeking out and receiving information about colorectal cancer and surgery was an effective coping mechanism. Patients often cited using the Internet to obtain information. Other patients reflected on their prior health care experiences to guide their experience undergoing surgery for colorectal cancer. One patient stated, “Because I’m so medically educated and I’ve known so many people who have [had] surgery, I knew I needed a really top-notch doctor who was a good communicator” [Participant 15].

#### *Emotion focused*

Patients described a number of emotion-focused coping strategies, including focusing on the positive, having a sense of humor, acceptance in older age, denial, distracting oneself, and suppressing negative emotions. For example, as one patient was faced with the prospect of undergoing surgery to remove her sigmoid cancer she said, “I guess I tried to look at the positive and say, ‘Okay, I have to get this done because that’s the only resolution to this problem and I have to deal with it.’ So it’s just coping with it as best I could” [Participant 5].

For other patients, denial of their diagnosis and risks of surgery was their preferred strategy to cope. One patient recalled how “I didn’t think about the risks of surgery at all. It’s all denial. I think anybody that gets cancer goes into denial” [Participant 18].

#### *Meaning focused*

Other patients described using religion or spiritual beliefs, defined as *meaning focused*, to cope with the cancer diagnosis and undergoing surgery.<sup>18–20</sup> For example, 1 patient recalled her reaction after she was told she had colon cancer and would need surgery: “I’m a strong believer in Christ Jesus. I prayed with my pastor and that was it. I wasn’t regretting or doubting anything, so, we went boldly in to action” [Participant 13]. Another patient reported not being frightened by the cancer or surgery because “my faith is so strong” [Participant 7].

#### *Role of social support network*

Nearly all patients cited the importance of a social support network in coping with their cancer diagnosis and the need for surgery. Patients described their social networks as comprising 3 main themes: (1) family, (2) friends, and (3) cancer support network. Patients cited the benefit of their social support network

throughout the surgical experience: during the preoperative period, during in-hospital recovery, and during postdischarge recovery. These themes are discussed in more detail next, and exemplary quotes are included in [Table 3](#).

#### *Family*

For many patients, having a spouse, sibling, or other relative present at their preoperative visit, on the day of surgery, or at home while recovering was crucial in helping them cope. One patient recalled how her brother “was my rock” by helping her navigate finding the best hospital for her treatment [Participant 19].

#### *Friends*

Other patients described how they had friends take on the role of providing support. One patient who had friends who are massage therapists reported how her “own personal support group came to the hospital. One friend came, and she rubbed my feet, and someone else came, and they did some massaging. That helped me throughout being in the hospital” [Participant 16].

#### *Cancer support group*

Depending on the patient, cancer support groups are another potential support mechanism. For one patient who got involved with a cancer support group, he “didn’t feel as alone.” He also believed that talking to other patients who have been through what he is going through was helpful “because they can tell you what you can expect” [Participant 20].

#### *Surgeon’s role helping patients cope with distress*

Patients’ beliefs about the surgeon’s involvement in helping them cope with undergoing surgery for a colorectal cancer diagnosis were grouped into 2 themes: (1) expectation of the surgeon’s role in helping patient cope; and (2) methods by which surgeons provide support. Patients predominantly described the surgeon’s role as being particularly relevant during the preoperative period and in-hospital recovery. These themes and subthemes are discussed in more detail next, and exemplary quotes are included in [Table 4](#).

#### *Expectation of the surgeon’s role in helping patient cope*

Most patients believed that the surgeon and the surgeon’s team need to be involved in helping patients cope. For example, one patient believed that “it is valuable for the surgeon to be aware of the mindset of the patient. Depression, yes, but I think especially more anxiety and fear” [Participant 24]. With this in mind, most patients acknowledged that the surgeon’s primary role is not to mitigate distress; instead another member of the surgeon’s team should take over if the patient needs emotional support. For example, a 90-year-old female patient noted, “Surgeons are not psychiatrists, or psychologists. They will not address your emotional needs. They’re technicians. And your emotional needs should be helped by somebody else” [Participant 8].

A common belief held by many patients was the need for an individual approach to help patients cope because everyone has different levels of distress and different abilities to manage that distress. A 72-year-old man who had undergone a right hemicolectomy for stage I colon cancer stated, “It’s a balancing act. I think some emotional support has to be incorporated. I can’t say how much. It depends on the situation. It depends on the level of stress the patient’s been going through” [Participant 9]. Similarly, some patients may already have help from their social support network or from mental health professionals and therefore would not need a surgeon or the surgeon’s office to help them cope.

**Table 2**  
Patient strategies for coping.

Themes	Subthemes	Selected exemplary quotes
Problem focused	Taking action	<ul style="list-style-type: none"> <li>• “I didn’t just sit back. I go into very practical mode. I said, I’ve got work to do now.” [Participant 1]</li> <li>• “I just went to the movie theater and said I don’t really need to empty the stoma bag but let’s just go do this. What can play out in your head can be the darkest thing. And once you just face it and do what you need to do to deal with that fear, you can kind of put it to rest.” [Participant 2]</li> </ul>
	Seeking out and receiving information	<ul style="list-style-type: none"> <li>• “Having an emotional response is pointless. It doesn’t accomplish anything. What does accomplish something is hunkering down and trying to figure out if there’s a way that you can fix it or if there is something you can do to make things better.” [Participant 1]</li> <li>• “I think that the more you know, the more things are explained to you, the less anxious you are.” [Participant 21]</li> <li>• “As soon as I got home, I started worrying about the stoma. But the first thing I did was go online and try to find blogs and reports from real people about what life is like, if they can wear normal clothes, if they have obstacles performing their day-to-day activities and so on.” [Participant 4]</li> <li>• “You’re obviously frightened about the cancer diagnosis and surgery. You don’t know what’s going to happen. I’m not a doctor. You don’t have the necessary skills to cope, so you do the best you can, and fortunately there’s the Internet now to read about everything.” [Participant 17]</li> <li>• “The people here made me feel so relaxed and gave me all the information I needed not to be to freaked out about any of it.” [Participant 2]</li> </ul>
Emotion focused	Reflection on prior health experience	<ul style="list-style-type: none"> <li>• “This is not my first surgery in life. I’ve had four spinal surgeries in the past, so I’ve had plenty of experience. You tend to take things as they come.” [Participant 12]</li> <li>• “Because I’m so medically educated and I’ve known so many people who have surgery, I knew I needed a really top-notch doctor who was a good communicator.” [Participant 15]</li> <li>• “Having seen my wife have cancer surgery makes me more familiar with what’s going on, and I feel less apprehensive about the whole process.” [Participant 24]</li> <li>• “I go into a kind of a practical mode and I think part of this is having had a kid who had serious health issues when he was younger that required me to research it, to look into things” [Participant 1]</li> </ul>
	Focus on positive	<ul style="list-style-type: none"> <li>• “If it ends up someday that I develop metastases, I’ll deal with that then, but not now. So I guess I’ve just been manipulating my attitudes for this whole thing to feel as positive as possible.” [Participant 2]</li> <li>• “I guess I tried to look at the positive and say, ‘Okay, I have to get this done because that’s the only resolution to this problem and I have to deal with it.’ So it’s just coping with it as best I could.” [Participant 5]</li> <li>• “I’m a very strong individual both emotionally and physically. So I said whatever happens, we’ll get through it one way or another. I always maintained positive to just get through what I needed to get through.” [Participant 3]</li> </ul>
Meaning focused	Having a sense of humor	<ul style="list-style-type: none"> <li>• “I just focused my mental energies on my sense of humor. Seeing the humor in it all was probably the strongest medicine I had.” [Participant 16]</li> <li>• “The doctor just started laughing and I started laughing and I think he’s very easy to laugh with and it’s remarkable how much humor can carry a bitter message, like a joke can make things so much easier.” [Participant 6]</li> <li>• “The day of surgery I was in good spirits. I was laughing, cracking jokes and stuff.” [Participant 19]</li> <li>• “The surgeon smiled at my stabs of humor. That was important and endeared him to me.” [Participant 14]</li> </ul>
	Acceptance in older age	<ul style="list-style-type: none"> <li>• “If you’re 50 and you’re told that you have cancer, then you worry that, I don’t know, X amount of years down the line it would come back. At 90 years old, I don’t have that problem.” [Participant 8]</li> <li>• “I’m 77 years old; I’ve had a very good life. If this is it, this is it.” [Participant 17]</li> </ul>
	Denial of cancer prognosis and risk of surgery	<ul style="list-style-type: none"> <li>• “There are a lot of negative emotions and things that could affected your understanding of the risks and benefits. I think if you dwelled in that, you could go to the worst-case scenario about a surgery and it’s just not something I allow myself to do.” [Participant 2]</li> <li>• “I didn’t think about the risks of surgery at all. It’s all denial. I think anybody that gets cancer goes into denial.” [Participant 18]</li> <li>• “I’m worried about the results of the next CT, but I’m trying to keep myself busy with other stuff to where I’m not thinking about it all the time.” [Participant 20]</li> </ul>
	Suppressing negative emotions and distracting oneself, compartmentalize	<ul style="list-style-type: none"> <li>• “I just got the diagnosis and was going to see my son and I was thinking, ‘I can’t fall apart in front of my son.’ So I was just able to kind of tamp it down, compartmentalize, kind of get rational about it.” [Participant 1]</li> <li>• “I’m a fatalist. Once the decision is there, I don’t even think emotional. I just do what I’m told.” [Participant 14]</li> <li>• “I just continued doing the things that I needed to do, and just keeping myself busy as much as I possibly could. So I would just load myself with working out of the house and doing things, but they would really take my mind off of the cancer.” [Participant 3]</li> <li>• “I have come to terms with cancer in the sense that I try not to think about it. When I think about it I try to kind of manipulate my mind not to think about it too long. I’m giving myself some time to relax.” [Participant 4]</li> </ul>
		<ul style="list-style-type: none"> <li>• “My faith is so strong that nothing gets me frightened. Because I said whatever is going to be is going to happen. The faith keeps a person strong.” [Participant 7]</li> <li>• “I just have a spiritual feeling that God will help me through this and that the cancer’s not going to spread all over my body.” [Participant 21]</li> <li>• “I prayed a lot. I’m a big believer in spirituality. Sometimes the worst things happen to your life, but there’s a reason why they’re happening so you have to find the good and grab onto it.” [Participant 3]</li> <li>• “I’m a strong believer in Christ Jesus. I prayed with my pastor and that was it. I wasn’t regretting or doubting anything, so, we went boldly in to action.” [Participant 13]</li> </ul>

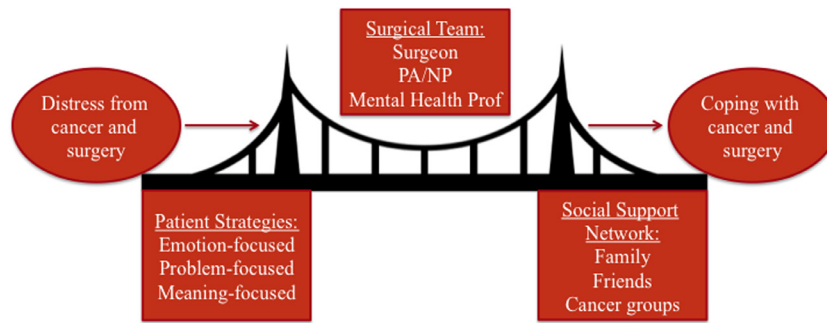
CT, computed tomography.

**Table 3**  
Role of social support network.

Themes	Selected exemplary quotes
Family	<ul style="list-style-type: none"> <li>• “My brother started looking up doctors that are affiliated with cancer hospitals. We tried [specialty cancer hospital] but they didn’t accept my insurance. It didn’t bother me because my brother was my rock. He was determined to find me something good.” [Participant 19]</li> <li>• “My family has been really supportive and helpful to me. And it’s helped me emotionally, being surrounded by that kind of love and support.” [Participant 2]</li> <li>• “My wife and nephew were there when I was told I had colon cancer. They provided me with adequate emotional support which was very important.” [Participant 14]</li> </ul>
Friends	<ul style="list-style-type: none"> <li>• “My own personal support group came to the hospital. One friend came, and she rubbed my feet, and someone else came, and they did some massaging. That helped me throughout being in the hospital.” [Participant 16]</li> <li>• “The day of surgery, my sister was there. A good friend was going to be there. I had my team ready so I was not as fearful.” [Participant 15]</li> </ul>
Cancer support group	<ul style="list-style-type: none"> <li>• “I sought out CancerCare and I think it helps to have other people to talk to because they can tell you what you can expect. Just if you’re around other people that have the same problem, I think it helps you.” [Participant 20]</li> <li>• “I can imagine that in general that would be an important thing to have, but not for me. I’m not particularly the support group kind of person.” [Participant 24]</li> </ul>

**Table 4**  
Surgeon’s role helping patients cope with distress.

Themes	Subthemes	Selected exemplary quotes
Expectation of the surgeon’s role in helping patient cope	Need for involvement of surgeon and/or surgeon’s team	<ul style="list-style-type: none"> <li>• “I think it would be great to have a psychological sort of care component to any kind of cancer diagnosis.” [Participant 1]</li> <li>• “I did believe that they totally understood what was going on with me emotionally as well as physically. That was really important and it was what I needed.” [Participant 2]</li> <li>• “Whether it’s the surgeon or anyone else that I come into contact with for this procedure, it’s important that they ask how someone is and try to ease their mind.” [Participant 5]</li> <li>• “It is valuable for the surgeon to be aware of the mindset of the patient. Depression, yes, but I think especially more anxiety and fear.” [Participant 24]</li> <li>• “I would think surgeons need to be as involved as possible. Some don’t choose to be involved because of their personality, but I think it’s important that they’re involved. You’re turning your whole life over to this person. It’s a big deal.” [Participant 21]</li> </ul>
	Surgeon not primarily responsible for mitigating distress	<ul style="list-style-type: none"> <li>• “Surgeons are not psychiatrists, or psychologists. They will not address your emotional needs. They’re technicians. And your emotional needs should be helped by somebody else.” [Participant 8]</li> <li>• “Surgeons should intervene and refer patients if they have to ensure that the person is emotionally good.” [Participant 11]</li> </ul>
	Need for individual approach	<ul style="list-style-type: none"> <li>• “It’s a balancing act. I think some emotional support has to be incorporated. I can’t say how much. It depends on the situation. It depends on the level of stress the patient’s been going through.” [Participant 9]</li> <li>• “Everybody is different. Maybe some people would want support from the surgeon. I don’t know where people get the support once they hear the diagnosis. I guess friends and family and therapists, it’s so individual. I turned to a friend more than any professional.” [Participant 16]</li> <li>• “I’ve got a psychiatrist to help me talk through this emotionally, but what about the people that don’t?” [Participant 21]</li> <li>• “I’ve been dealing with a very supportive team and I’m taking things one step at a time. But if I ever get really anxious, I will ask to see a psychiatrist or therapist because I’ve been in therapy in various points in my life.” [Participant 22].</li> </ul>
Methods by which surgeons provide support	Educating, explaining, and communicating about the surgery	<ul style="list-style-type: none"> <li>• “I understood the risks of surgery he was talking about. So that was as much emotional support that he could give me, was what his opinion was as to how the surgery would progress. I was pleased with that.” [Participant 10]</li> <li>• “What they say to you makes big impressions on people and makes them feel good. Being very reassuring, very clear, and explaining things in a good manner, especially somebody who’s vulnerable, I think that’s going to help them. It’s going to put them at ease. I think that’s the most important thing.” [Participant 6]</li> <li>• “I think that the surgeons should make themselves available for any questions. I mean, I know that they’re busy with a lot of other things, but I think that basically they educate you about what to expect. I think it’s important to have that involvement with your patients, regardless of what kind of care you’re delivering.” [Participant 21]</li> </ul>
	Surgeons providing encouragement, optimism, empathy, and developing a personal rapport	<ul style="list-style-type: none"> <li>• “During our appointment, all of a sudden, I just started crying. And she moved over and sat down next to me and put her arm around me. I have never had a doctor do that to me. And it meant everything to me in that moment that there was a medical professional that was also relating to me on an emotional level. And that was just huge.” [Participant 2]</li> <li>• “He asked to see my son’s photo and tried to create a personal rapport. It gives an enormous boost to the psychology. It’s not about counseling for an hour. It’s to show you they appreciate you are going through hardship and they give you some hope to move on.” [Participant 4]</li> </ul>
	Instilling confidence in the surgeon’s ability to perform surgery	<ul style="list-style-type: none"> <li>• “Going into something that big, obviously I was definitely nervous and scared. But at the same time, it is alleviated by the fact that I felt that there is a professional and it’s a competent surgeon and that I trusted her decision. I trusted her performance for the surgery.” [Participant 5]</li> <li>• “She had this peaceful ambience about her. She said I’m going to be your surgeon. She explained to me what the results of the colonoscopy were and they said that I have cancer, a mass. She was going to operate on me and she gave me a level of confidence to put me in a relative state of peacefulness. I established a rapport with her right away.” [Participant 9]</li> </ul>



**Fig. 1.** Conceptual framework to describe how patients cope with colorectal cancer diagnosis and surgical experience. NP, nurse practitioner; PA, physician assistant; prof, professional.

### Methods by which surgeons provide support

Many patients described various ways in which surgeons help patients cope. One method surgeons often use is the simple act of educating patients about their disease, the risks and benefits of the surgery, and the recovery process and long-term prognosis. Patients emphasized that it is important to communicate this information in a clear, concise, and compassionate manner. As one patient explained, “Being very reassuring, very clear, and explaining things in a good manner, especially somebody who’s vulnerable, I think that’s going to help them. It’s going to put them at ease. I think that’s the most important thing” [Participant 6].

Surgeons also provide encouragement, optimism, and empathy, as well as develop a personal rapport to help patients cope. One patient with stage III rectal cancer recalled a preoperative appointment when “All of a sudden, I just started crying. And she moved over and sat down next to me and put her arm around me. I have never had a doctor do that to me. And it meant everything to me in that moment that there was a medical professional that was also relating to me on an emotional level. And that was just huge” [Participant 2].

Importantly, though, patients believed that the most important way surgeons help patients cope is by instilling confidence in their ability to perform the surgery. One patient recalled being scared about undergoing surgery but that “it is alleviated by the fact that I felt that there is a professional and it’s a competent surgeon and that I trusted her decision. I trusted her performance for the surgery” [Participant 5].

### Conceptual framework

The results of this qualitative study suggest an overarching conceptual framework for how to facilitate effective coping strategies in colorectal cancer patients undergoing surgery. Ultimately, patients arrive at the surgeon’s office with 2 pillars that provide the basis for their ability to cope: Their own internal coping strategies (problem focused, emotion focused, and meaning focused) and the presence or absence of a social support network. The role of the surgeon is to bridge the gap to help patients cope if they lack either of those pillars, predominantly in the preoperative period and during in-hospital recovery (Fig. 1). Surgeons may accomplish this by providing encouragement and psychosocial support, referring patients to social workers or mental health providers, or helping patients learn stress management skills.

### Discussion

In this qualitative study of patients with a new diagnosis of colorectal cancer, we found that patients rely on both their own coping strategies and support from their friends and family to

deal with the distress of their diagnosis and need for surgery. Although most patients did not believe the surgeon should be the lead provider in mitigating distress, they were able to identify several tactics surgeons already employ or could potentially employ in the preoperative period and during the in-hospital recovery to help patients cope. Helping patients cope with distress is not simply an academic exercise: Both the National Comprehensive Cancer Network and the American College of Surgeons Commission on Cancer have mandated that new cancer patients are screened and treated for distress because there is evidence that distress leads to worse clinical outcomes.<sup>5–7</sup> Surgeons need to be prepared to address this topic because they are often the first physicians to engage with patients with a new colorectal cancer diagnosis and because of their close interactions throughout treatment. Qualitative methodology is a well-suited, yet often underused, research strategy for gaining insight into improving health care quality in this patient population.<sup>17</sup>

This study makes several important additions to the literature. First, whereas other studies have focused on family members of the patient,<sup>21</sup> survivorship and unwanted long-term postoperative symptoms,<sup>22–24</sup> and patients with metastatic disease,<sup>25,26</sup> this is the first study to focus exclusively on colorectal cancer patients undergoing resection for cure. Although previous research has established a paradigm for characterizing coping strategies to better inform the development of a patient-specific psychosocial intervention,<sup>27–29</sup> colorectal cancer patients experience stigma that is distinct from other cancer types, namely irregular bowel function and needing an ostomy. Therefore, we believe the results from this study can more directly help surgeons and their teams care for colorectal cancer patients. For example, future colorectal cancer patients should be assessed for what problem-focused (eg, how much information about risks of surgery or likelihood of needing a stoma they want to receive, what influence any prior health care experience may have on their current situation), emotion-focused (eg, ability to focus on positive results), or meaning-focused strategies (eg, religious or spiritual background) they are able to draw upon.

Second, our study specifically assesses patients’ views of the surgeon’s role in helping them cope with the cancer diagnosis and the surgical experience. To our knowledge, this is the first time this has been reported and therefore is an important contribution to the literature. Important takeaways from this aspect of the study are that patients want surgeons to initiate a conversation with them about how they are dealing with the distress of a new cancer diagnosis and the prospect of undergoing surgery. If patients then report high levels of distress or poor coping strategies, patients want the surgeon’s team to help them. Simple ways surgeons can help patients cope include providing sufficient education for a patient to prepare for surgery and the recovery process;

instilling confidence in their ability; communicating with empathy; and conveying encouragement and optimism when possible. Nevertheless, patients still expect that surgeons will continue to focus their energy on the actual surgery. If a patient needs further support, surgeons may use physician extenders or social workers to provide additional education or counseling or refer patients to mental health professionals as needed.

Ultimately, any intervention from the surgeon and the surgeon's office to mitigate distress in this patient population will need to evaluate a patient's underlying ability to cope using 2 important pillars: (1) their own internal coping strategies (problem-focused, emotion-focused, and meaning-focused coping); and (2) the presence or absence of a social support network. The role of the surgeon will then be informed by whether these 2 pillars are lacking, in which case the surgeon may bridge the gap to help patients cope (Fig). One way the surgeon's team could do this would be to partner with a mental health professional to implement a perioperative intervention that teaches patients stress management skills,<sup>30</sup> contemplative self-healing,<sup>31</sup> or meaning-centered psychotherapy<sup>32</sup>; these are all examples of brief, time-limited interventions that have proven successful in cancer patients.

There are a few limitations to this study that should be considered in interpreting the present results. As is common in psychosocial studies, we had a predominance of women. This may also be reflective of our patient population because an internal audit during the study period revealed that the majority of patients undergoing surgery for colorectal cancer were women (61%). Efforts were made by the research team to seek out men with colorectal cancer; however, we ultimately were unable to achieve equal representation because of limitations of the study period. Of note, no potential participant, man or woman, declined participation in this study; this suggests that men were equally as willing and interested in partaking in this study. Although there were no major differences observed in terms of frequency and type of coping strategy cited by men and women in our study, literature in non-surgical patients suggests that there may be a gender difference in approach to coping. For example, women may be more likely to use verbal strategies, whereas men may be more likely to use distraction strategies.<sup>33</sup> Future studies are needed to evaluate differences in coping approaches between men and women.

In addition, we are combining interviews with preoperative patients and postoperative patients, 2 dramatically different periods, to obtain a more complete understanding of patient perceptions. This was done because preoperative patients cannot comment on how they coped after surgery and postoperative patients may not accurately recall how they dealt with their emotions before surgery.<sup>34,35</sup> There may also be differences in patient responses based on which physicians the patient had seen; for example, one of the surgeons was trained as a surgical oncologist and therefore may be more adept at providing emotional support to patients. We may also have not reported certain coping strategies or other issues related to managing distress, such as having a living will or power of attorney, that were not spontaneously brought up by patients.

In conclusion, a robust patient-centered approach to a new colorectal cancer patient should include a multipronged approach to screen patients for distress, identify and strengthen a patient's own coping strategies, facilitate a strong social support network, and provide patients with the option to obtain further support from the surgeon's office. This final component should only be offered if patients are noted to have a deficit in their own coping strategies or lack a strong social support network. Next steps include evaluating if taking these steps to help colorectal cancer patients with distress cope with their diagnosis and the surgical experience leads to improvement in short and long-term outcomes.

## Acknowledgments

The authors thank Dr. Laura Robbins, DSW, CSW, MSW, Associate Research Professor of Social Work in Medicine at Weill Medical College of Cornell University, for her guidance in qualitative research methodology and analysis.

## References

1. Fox JP, Philip EJ, Gross CP, Desai RA, Killelea B, Desai MM. Associations between mental health and surgical outcomes among women undergoing mastectomy for cancer. *Breast J*. 2013;19:276–284.
2. Sharma P, Henriksen CH, Zargar-Shostari K, Xin R, Poch MA, Pow-Sang JM, et al. Preoperative patient reported mental health is associated with high grade complications after radical cystectomy. *J Urol*. 2016;195:47–52.
3. Lee DS, Marsh L, Garcia-Altieri MA, Chiu LW, Awad SS. Active mental illnesses adversely affect surgical outcomes. *Am Surg*. 2016;82:1238–1243.
4. Foster C, Haviland J, Winter J, Grimmett C, Chivers Seymour K, Batehup L, et al. Pre-surgery depression and confidence to manage problems predict recovery trajectories of health and wellbeing in the first two years following colorectal cancer: results from the CREW Cohort Study. *PLoS One*. 2016;11.
5. NCCN practice guidelines for the management of psychosocial distress. National Comprehensive Cancer Network. *Oncology (Williston Park)*. 1999;13:113–147.
6. Commission on Cancer. Cancer Program Standards: Ensuring Patient-Centered Care. Chicago (IL): American College of Surgeons; 2016 [cited 2017 Mar 1]. Available from [https://www.facs.org/~media/files/quality\\_programs/cancer/coc/2016\\_coc\\_standards\\_manual\\_interactive.pdf](https://www.facs.org/~media/files/quality_programs/cancer/coc/2016_coc_standards_manual_interactive.pdf).ashx.
7. Wagner LI, Spiegel D, Pearman T. Using the science of psychosocial care to implement the new american college of surgeons commission on cancer distress screening standard. *J Natl Compr Canc Netw*. 2013;11:214–221.
8. Brorsson B, Asberg KH. Katz index of independence in ADL. Reliability and validity in short-term care. *Scand J Rehabil Med*. 1984;16:125–132.
9. Bjelland I, Dahl AA, Haug TT, Neckelmann D. The validity of the Hospital Anxiety and Depression Scale. An updated literature review. *J Psychosom Res*. 2002;52:69–77.
10. Keeley T, Al-Janabi H, Lorgelly P, Coast J. A qualitative assessment of the content validity of the ICECAP-A and EQ-5D-5L and their appropriateness for use in health research. *PLoS One*. 2013;8:e85287.
11. Schmocker RK, Cherney Stafford LM, Siy AB, Levenson GE, Winslow ER. Understanding the determinants of patient satisfaction with surgical care using the Consumer Assessment of Healthcare Providers and Systems surgical care survey (S-CAHPS). *Surgery*. 2015;158:1724–1733.
12. ClinvestiGator [database]. New York (NY): ClinvestiGator; July 19, 2017. Available from <http://www.clininvestigator.com/>.
13. Fusch PI, Ness LR. Are we there yet? Data saturation in qualitative research. *Qualitat Rep*. 2015;20:1408–1416.
14. Guest G, Bunce A, Johnson L. How many interviews are enough? An experiment with data saturation and variability. *Field Methods*. 2006;18:59–82.
15. Glaser B, Strauss A. *The discovery of grounded theory: strategies for qualitative research*. Chicago (IL): Aldine Transaction; 1967.
16. Foley G, Timonen V. Using grounded theory method to capture and analyze health care experiences. *Health Serv Res*. 2015;50:1195–1210.
17. Maragh-Bass AC, Appelson JR, Changoor NR, Davis WA, Haider AH, Morris MA. Prioritizing qualitative research in surgery: a synthesis and analysis of publication trends. *Surgery*. 2016;160:1447–1455.
18. Folkman S, Moskowitz JT. Positive affect and the other side of coping. *Am Psychol*. 2000;55:647–654.
19. *Encyclopedia of behavioral medicine*. New York (NY): Springer; 2013:1913–1915.
20. Carver CS, Scheier MF, Weintraub JK. Assessing coping strategies: a theoretically based approach. *J Pers Soc Psychol*. 1989;56:267–283.
21. Asiedu GB, Eustace RW, Eton DT, Radecki Breitkopf C. Coping with colorectal cancer: a qualitative exploration with patients and their family members. *Fam Pract*. 2014;31:598–606.
22. Appleton L, Goodlad S, Irvine F, Poole H, Wall C. Patients' experiences of living beyond colorectal cancer: a qualitative study. *Eur J Oncol Nurs*. 2013;17:610–617.
23. Landers M, McCarthy G, Savage E. Bowel symptom experiences and management following sphincter saving surgery for rectal cancer: a qualitative perspective. *Eur J Oncol Nurs*. 2012;16:293–300.
24. Thomas C, Turner P, Madden F. Coping and the outcome of stoma surgery. *J Psychosom Res*. 1988;32:457–467.
25. McCahill LE, Hamel-Bissell BP. The patient lived experience for surgical treatment of colorectal liver metastases: a phenomenological study. *Palliat Support Care*. 2009;7:65–73.
26. Houldin A, Lewis FM. Salvaging their normal lives: a qualitative study of patients with recently diagnosed advanced colorectal cancer. *Oncol Nurs Forum*. 2006;33:719–725.
27. Carver CS, Pozo C, Harris SD, Noriega V, Scheier MF, Robinson DS, et al. How coping mediates the effect of optimism on distress: a study of women with early stage breast cancer. *J Pers Soc Psychol*. 1993;65:375–390.
28. Perczek RE, Burke MA, Carver CS, Krongrad A, Terris MK. Facing a prostate cancer diagnosis: who is at risk for increased distress? *Cancer*. 2002;94:2923–2929.
29. Campbell LC, Keefe FJ, Scipio C, McKee DC, Edwards CL, Herman SH, et al. Facilitating research participation and improving quality of life for African Ameri-

- can prostate cancer survivors and their intimate partners. A pilot study of telephone-based coping skills training. *Cancer*. 2007;109(2 Suppl):414–424.
30. Parker PA, Pettaway CA, Babaian RJ, Pisters LL, Miles B, Fortier A, et al. The effects of a presurgical stress management intervention for men with prostate cancer undergoing radical prostatectomy. *J Clin Oncol*. 2009;27:3169–3176.
  31. Charlson ME, Loizzo J, Moadel A, Neale M, Newman C, Olivo E, et al. Contemplative self healing in women breast cancer survivors: a pilot study in underserved minority women shows improvement in quality of life and reduced stress. *BMC Complement Altern Med*. 2014;14:349.
  32. Breitbart W, Rosenfeld B, Pessin H, Applebaum A, Kulikowski J, Lichtenthal WG. Meaning-centered group psychotherapy: an effective intervention for improving psychological well-being in patients with advanced cancer. *J Clin Oncol*. 2015;33:749–754.
  33. Liddon L, Kingerlee R, Barry JA. Gender differences in preferences for psychological treatment, coping strategies, and triggers to help-seeking. *Br J Clin Psychol*. 2018;57:42–58.
  34. Aleem IS, Duncan J, Ahmed AM, Zarrabian M, Eck J, Rhee J, et al. Do lumbar decompression and fusion patients recall their preoperative status? A cohort study of recall bias in patient-reported outcomes. 2017;42:128–134 *Spine (Phila Pa 1976)*.
  35. Mancuso CA, Charlson ME. Does recollection error threaten the validity of cross-sectional studies of effectiveness? *Med Care*. 1995;33(4 Suppl):AS77–AS88.