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# MESSAGE IN SUPPORTIVE CANCER CARE

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**OBJECTIVE:** *To review recent findings on the utilization of massage by cancer patients, including evidence of effects in supportive and palliative cancer care, current understanding of safety considerations and adaptations needed, education of professional and family caregivers to provide this form of support, and guidelines for oncology nurses in referring patients.*

**DATA SOURCES:** *Journal articles, government and special health reports, book chapters, and web-based resources.*

**CONCLUSION:** *The massage profession and the disciplines of clinical oncology have experienced a rapprochement in recent decades over questions of safety and efficacy. However, there is now significant recognition of the potential contributions of massage in supportive care, as well as greater understanding of the modifications needed in offering massage to cancer patients.*

**IMPLICATIONS FOR NURSING PRACTICE:** *Massage offers significant potential for benefiting quality of life when applied with proper understanding of the adaptations needed to accommodate the needs and vulnerabilities of cancer patients.*

**KEY WORDS:** *Massage, palliative care, supportive care, integrative oncology, informal caregiving, spouse caregiving, family caregiver education*

ONE OF the most primal and spontaneous ways in which humans offer support to another who is ill or suffering has been through touch. Florence Nightingale, founder of the modern nursing profession, recognized this and regarded caring touch as an essential ingredient of good nursing care.<sup>1</sup> Indeed, touch as a simple expression of interpersonal caring – without technique or manipulation of tissue – is now known to evoke

powerful salutogenic responses in the body and mind of the recipient.

Beyond simple caring touch, there are several modalities that use touch as a deliberate intervention in supportive cancer care. The diverse modalities are grounded in different theoretical systems with little uniformity in use of language. As a result, there is often imprecise use of the term “massage,” blurring boundaries between it and other touch-based methods. The National Cancer

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Institute's Office of Cancer Complementary and Alternative Medicine has offered a classification system in which some methods commonly referred to as variants of massage – methods that are used by some massage therapists – are classified separately.<sup>2</sup> For example, Reiki, Therapeutic Touch (TT), and Healing Touch (HT) are classed as “Energy Therapies,” reflexology is separated from massage in “Manipulative and Body-Based Methods,” and aromatherapy is listed as a “Mind-body Intervention.” This ambiguity makes it important in clinical communications and research to clarify how the term “massage” is being used in a given context. In this article, “massage” refers to direct manipulation of soft tissue.

While various forms of therapeutic manipulation of soft tissue have been practiced across cultures for thousands of years, Swedish (also referred to as “classical”) massage is the most common form in the West and is the core of most massage training programs. Swedish massage was developed in the 19th century by Per Henrik Ling and introduced as a health care modality in the United States (US) in the 1850s by George and Charles Taylor, two physicians who had studied in Sweden.

Medical interest in massage diminished by the 1930s and 1940s with advances in pharmaceutical and surgical medicine, although it remained part of the training for the nursing profession, including the nightly back rub much-revered by hospital patients. The establishment of a distinct profession of massage therapy in the US was advanced in 1943 when the graduating class of the College of Swedish Massage in Chicago formed an association, which eventually became the American Massage Therapy Association. In the 1970s, interest began to surge with popularity of the concepts of holistic health and complementary and alternative therapies.

Important to the history of massage in cancer has been the evolution of beliefs regarding whether massage could contribute to metastasis. Such concerns were based on the concept that increased blood and lymph circulation might encourage the spread of cancer. This fear was widely propagated through the massage profession and reinforced through oral tradition, classroom teaching, and apprenticeship.<sup>3</sup>

In the last two decades, however, a heightened emphasis on evidence-based practices has led to critical examination of this issue. Now the speed of circulation is no longer thought to influence

cancer spread. As explained by Pfeifer, “Site predilection does not depend on the anatomy of the circulation as previously believed. Tumor cells flow through the circulatory system based on venous drainage from the primary tumor. However, the site and survival of the disseminated tumor cells depend on the *qualities and properties unique to the tumor cell itself*. Certain tumor cells possess an affinity for specific organs. The metastatic process is not random.”<sup>4</sup> If circulation did influence cancer spread, many other normal and accepted activities would also contribute to metastasis, including hot showers, exercise, sexual activity, and other aspects of daily life, but patients are almost always encouraged to exercise and remain as active as possible.<sup>5</sup>

The concern about metastasis is increasingly regarded as myth in the massage profession.<sup>3,5-8</sup> Massage is now recognized as an intervention for quality of life in both palliative and end-of-life care. The term *oncology massage* – referring to the adaptation of massage techniques to accommodate the special considerations of people experiencing cancer or its treatments – is relatively recent, with the first organized trainings being developed in the 1990s.

### USE OF MASSAGE BY CANCER PATIENTS

According to an American Hospital Association survey, the number of hospitals offering complementary therapies grew from 7.7% in 1998 to 37.3% in 2007, with about 71% of those offering massage. Reasons most cited by hospitals offering massage include stress reduction (71%), pain management (66%), cancer patient support (57%), and palliative care (41%), among others.<sup>9</sup>

Massage is among the more popular modalities of complementary therapy among cancer patients. Surveys indicate that 63% to 91% have used some form of complementary therapy, with one study reporting an average of 4.8 different complementary modalities used,<sup>10</sup> and reports on use of massage range from 11% to 53% of cancer patients.<sup>11-17</sup> The National Comprehensive Cancer Network (NCCN), a nonprofit alliance of 21 of the world's leading cancer centers, now recommends massage in its “Guidelines for Supportive Care,” based on the growing body of evidence of its safety and benefits for quality of life.<sup>18</sup>

**Varieties of Touch-Based Modalities**

As noted earlier, a wide variety of touch-related modalities are commonly offered by complementary therapists to cancer patients. For many modalities, the evidence base is weak or non-existent, though they may lead to perceived benefits for patients. Touch-related modalities may be roughly allocated to two groups based on the degree of contact and soft tissue manipulation involved. As listed in Table 1, the methods in Group A use principles of light or gentle touch, or in some cases even no direct contact, to balance or harmonize the human energy system or nervous system or to provide comfort and relaxation. There is little or no emphasis on manipulating soft tissue directly, hence little or no need for modification of technique with cancer patients. Of these, TT, Reiki, and HT have the most empirical support, and these modalities are reviewed in a separate article elsewhere in this issue.<sup>19</sup>

In contrast, the methods in Group B directly manipulate soft tissue and therefore require adaptation of technique to accommodate the vulnerabilities caused by cancer and its treatments (discussed later). Swedish massage has the most extensive evidence base and is the baseline training in most massage schools. Its most recognizable hallmarks are the familiar long, flowing or gliding strokes of *effleurage*, and the strokes of *pétrissage* that lift, roll, or knead the tissue. These methods also are relatively easily learned and hence can be taught to family caregivers, as will be discussed later. Other common Swedish techniques include *friction*, *vibration*, and *tapotement* (percussion or tapping).

Because of its pervasiveness, Swedish methods, are usually what people associate with massage. Swedish methods tend to be the basic approach used by massage therapists who work with cancer patients, and they figure most prominently in research on the effects of massage in supportive cancer care. However, while these methods can be adapted to the needs of cancer patients, few massage therapists have actually received formal training in such modification.

**MASSAGE EFFECTS IN SUPPORTIVE CARE**

Over 80 clinical trials of massage for a wide range of health conditions have found consistent benefit for anxiety and depression.<sup>20</sup> These findings are supported by a meta-analysis of 37

**TABLE 1.**  
**Touch-based Methods Commonly Available to Cancer Patients From Complementary Therapists**

<p><b>Group A</b> Methods using principles of subtle energy or very light touch and requiring minimal or no adaptation:</p> <ul style="list-style-type: none"> <li>Bowen Technique</li> <li>Compassionate Touch</li> <li>Craniosacral Therapy</li> <li>Healing Touch</li> <li>Jin Shin Jyutsu</li> <li>Polarity Therapy</li> <li>Reflexology</li> <li>Reiki</li> <li>Therapeutic Touch</li> </ul> <p><b>Group B</b> Methods using direct manipulation of soft tissue and requiring awareness of needed adaptations in technique:</p> <ul style="list-style-type: none"> <li>Acupressure</li> <li>Ayurvedic massage</li> <li>Fascial release techniques</li> <li>Lomilomi</li> <li>Lymph drainage therapies</li> <li>Neuromuscular therapy</li> <li>Seated chair massage</li> <li>Shiatsu</li> <li>Swedish massage</li> <li>Trigger point therapy</li> <li>Zero balancing</li> </ul>
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randomized clinical trials of massage, with the largest effects being reduction of anxiety and depression.<sup>21</sup> It is important to note that these effects were strongest in studies involving a series of massages over time rather than a single treatment. Anxiety and depression are common sources of distress in people with cancer and focus of many quality-of-life interventions.

In cancer, studies consistently demonstrate the potential of massage to improve mood and quality of life. A recent systematic review<sup>22</sup> of randomized clinical trials of Swedish methods for cancer patients found 14 trials met inclusion criteria. While methodological quality was considered poor, the evidence suggests that massage can alleviate a wide range of symptoms including pain, nausea, anxiety, depression, anger, stress, and fatigue. This followed an earlier Cochrane review that concluded that short-term benefits of massage include improved psychological well-being (most consistently reduced anxiety), and in some cases reduced severity of physical symptoms.<sup>23</sup>

While an exhaustive review of research in this area is beyond the scope of this article, the studies

highlighted below illustrate progress in building the evidence base for massage in cancer.

### ***Memorial Sloan-Kettering Study***

In a large study of massage effects on symptom levels, 1,290 cancer patients from Memorial Sloan-Kettering Cancer Center were assessed immediately before and 5 to 15 minutes after a massage.<sup>24</sup> Patients rated the severity of pain, fatigue, stress/anxiety, nausea, depression, and “other” symptoms on a 10-point scale. Sessions averaged 20 minutes for inpatients and 60 minutes for outpatients. Symptom scores were reduced by an average of 50%, even for patients reporting high baseline scores. Outpatient scores improved about 10% more than inpatient scores. About a quarter of the patients were re-assessed 48 hours after treatment and evidence of lasting effects of massage was examined. Inpatient data suggested a return toward baseline within a day or so. Outpatients showed no such trend, and instead had “persisting benefit” across the total of 48 hours studied. An important finding of this study was evidence of cumulative effects of repeated massages. A general linear model of the findings, adjusted for baseline score and clustered by patient, suggested that the effects probably increase for each additional treatment. The authors conclude that major, clinically relevant, immediate improvements resulted from massage, even in patients with high baseline scores, and that outpatients experienced greater improvement than inpatients.

### ***Massage Versus Simple Touch***

In an important large, multi-site randomized clinical trial, 380 adults with advanced cancer who were experiencing moderate-to-severe pain (90% were enrolled in hospice) were randomized to six 30-minute sessions of either massage or simple touch (without manipulation) over 2 weeks. Both groups demonstrated immediate improvement in pain and mood, although massage was superior for both symptoms. No between-group mean differences occurred over time in sustained pain, quality of life, symptom distress, or analgesic medication use. This study makes a strong point in favor of touch in general as being beneficial for this population, whether or not formal massage intervention is available.<sup>25</sup>

### ***Massage Versus Healing Touch***

One of the more widely used energy-based modalities is HT. In a randomized, prospective,

two-period, crossover intervention study with 230 cancer patients, Post-White et al<sup>26</sup> tested the effects of massage therapy and HT, in comparison to presence alone or standard care, in inducing relaxation and reducing symptoms. Both massage and HT lowered blood pressure, respiratory rate, heart rate, and total mood disturbance. Massage lowered anxiety and HT lowered fatigue. Pain ratings were lower after massage and HT, with 4-week non-steroidal anti-inflammatory drug use less during massage treatment. There were no effects on nausea. Presence alone reduced respiratory and heart rates but did not differ from standard care on any measure of pain, nausea, mood states, anxiety, or fatigue. The researchers concluded that massage and HT are more effective than presence alone or standard care in reducing pain, mood disturbance, and fatigue in patients receiving cancer chemotherapy.<sup>26</sup>

### ***Breast Cancer***

Several well-designed studies have examined the effects of massage in breast cancer patients. One randomized controlled trial investigated the efficacy of classical massage treatment in reducing breast cancer-related symptoms and in improving mood disturbances. For 5 weeks the intervention group received bi-weekly 30-minute classical massages in the back and head-neck areas. Significantly higher reductions of physical discomfort, fatigue, and mood disturbance were found in the intervention group versus controls.<sup>27</sup>

In another randomized controlled trial with 34 stage I and II breast cancer patients, researchers used a regimen of 30-minute massages three times per week for 5 weeks. The massages consisted of stroking, squeezing, and stretching techniques to the head, arms, legs/feet, and back. Immediate effects included reductions in anxiety, depressed mood, and anger. Long-term effects included reduced depression and hostility, and increased urinary dopamine, serotonin values, natural killer cell numbers, and lymphocytes.<sup>28</sup> Another randomized trial with 39 women with breast cancer undergoing chemotherapy found significant reduction in nausea after massage.<sup>29</sup>

An important issue in women undergoing treatment for breast cancer is lymphedema. In a randomized clinical trial of 120 women who had breast surgery involving dissection of axillary lymph nodes, a physiotherapy regimen of manual lymph drainage, massage of scar tissue, and progressive active and action-assisted shoulder

exercises led to significant reduction in development of lymphedema during a year of follow-up.<sup>30</sup>

**Other Studies of Symptoms and Side Effects**

In radiation therapy, a randomized trial with 100 patients found significant reductions of 45% in anxiety from pre to immediately post massage on a visual analog scale, although the impact did not appear to affect longer term anxiety scores.<sup>31</sup> Wilkie et al<sup>32</sup> randomized 29 cancer hospice patients to routine care or four massages over 2 weeks, and found significant reductions in pain intensity. Weinrich and Weinrich<sup>33</sup> randomized 28 patients treated with chemotherapy or radiation to a single 10-minute back massage or a 10-minute visit and found significant reduction in pain for men but not women (however, men had greater pain levels at baseline).

Meek<sup>34</sup> found that after a 3-minute slow-stroke back massage, 30 hospice patients had significant improvements in several physiologic indices of relaxation, including systolic and diastolic blood pressure, heart rate, and skin temperature. Smith et al<sup>35</sup> reported that patients receiving chemotherapy or radiation therapy had significant improvements in pain, sleep quality, and symptom distress using three 30-minute treatments with Swedish massage. Tope et al<sup>36</sup> conducted a controlled trial of a 20-minute shoulder, neck, head, and facial massage for 7 days in bone marrow transplant patients and found significant benefits for anxiety, distress, fatigue, and nausea.

In hospitalized cancer patients, Ferrell-Torry and Glick<sup>37</sup> examined the effects of massage to the feet, back, neck, and shoulder areas on pain perception, anxiety, and relaxation levels, and found significant improvements with just two 30-minute sessions on consecutive evenings. In a controlled study of 52 cancer patients, a 15-minute regimen of massage to hands, feet, shoulders, and neck significantly reduced pain and anxiety.<sup>38</sup> A study of the phenomenology of cancer showed that 20 minutes of light massage (gentle stroking to hand/forearm or foot/lower part of the leg) led patients to report “meaningful relief” from suffering, the experience of “being special,” and positive relationships with those providing the massage,<sup>39</sup> all important outcomes from a quality-of-life point of view.

**Family Caregiver Use**

While most research has examined massage delivered by professionals, there is growing interest

in the ability of family caregivers to use simple methods in palliative care at home. One study<sup>40</sup> used a randomized controlled trial with 97 patients and their family caregivers to evaluate effects of caregivers’ learning from a 78-minute instructional DVD and manual, “The Touch, Caring and Cancer Program,” on simple massage techniques for home use. The program focuses on using light pressures and uncomplicated methods for general comfort and relaxation.

Control caregivers were assigned to read to the patient from literature of the patient’s choice. Patients rated their symptoms on a 10-point scale before and after each of four 20-minute sessions with their assigned activity. Symptoms rated included pain, fatigue, stress/anxiety, nausea, depression, and other. Significant reductions were seen for all symptoms after both activities, and ranged from 29% to 44% for massage, approaching the magnitude of effects seen in some studies using professional therapists. Caregivers in the massage condition also showed significant gains in their confidence and comfort with using touch and massage as part of caregiving at home.

**SAFETY CONSIDERATIONS AND ADAPTATIONS**

In general, the research notes no adverse effects of massage therapy in cancer patients.<sup>24-26,41</sup> However, there is consensus that massage therapists should have additional knowledge, skill, and experience in safely practicing with this population.<sup>42-44</sup> For most massage therapists this requires specialized training in oncology massage.

Technique needs to be modified to accommodate the symptoms of cancer and side effects of treatment. Principal adjustments are in use of pressure, joint movement, and the position of the massage recipient on the massage table or other surface.<sup>6,7</sup> Additional adjustments may be made in session length or timing (working within or around cyclical side effects or symptoms), lubricants used, speed or rhythm of massage strokes, and other factors. Modifications may be implemented over the whole body, or at specific sites affected by cancer or its treatment.

The most common element of massage to be modified in cancer patients is pressure. In sharp contrast to the deeper pressures routinely used in conventional massage therapy, lighter pressures are used in many cases. These pressures are well described as those one would apply in “light

lotioning” or “heavy lotioning”<sup>6,7</sup> during massage, and are used when tissues are fragile or unstable. Gentle pressures are also used at sites of bone metastasis with fracture risk, sensation changes from peripheral neuropathy, over surgical scars, at sites of deep vein thrombosis risk, and in areas of cancer pain and discomfort.<sup>6,45</sup> Overall pressure is modified for patients with thrombocytopenia, leukemia, or at any time easy bruising and bleeding are present.<sup>7</sup> It is important to note that relaxation, with its broad spectrum of benefits, can be achieved with these light pressures.

Many pressure and joint movement contraindications persist long after cancer treatment is complete, and some may continue indefinitely. Pressure is modified for long-term side effects and complications of cancer treatment such as lymphedema, lymphedema risk, osteoporosis, and skin sensitivity from radiation therapy.<sup>7,46</sup>

Of particular importance is modification of pressure any time there is risk of lymphedema. Deep massage pressure is thought to injure delicate lymphatic structures.<sup>47-49</sup> When lymphatic function is compromised by removal or radiation of lymph nodes, significant adjustments must be made in massage pressure, direction of stroke, and other factors. To avoid precipitating a lymphedema episode or triggering chronic lymphedema, oncology massage therapists are careful to avoid heat, pressure, and excessive joint movement in the body region served by the missing or compromised lymph nodes.

Most often, this precaution limits massage on the at-risk extremity and the adjacent trunk quadrant. For example, after breast cancer surgery with axillary lymph node dissection, massage pressure is limited to light or heavy lotioning over the upper extremity and upper trunk quadrant, anterior and posterior, defined by the midline, the clavicle, and the lowest rib. Therapists avoid aiming strokes at the area of missing or compromised lymph nodes. This precaution is followed even with a sentinel node biopsy.<sup>6,50</sup>

While conservative, these modifications for lymphedema risk mirror the widely advised precautions of avoidance of activities that raise blood pressure, exposure to excessive heat, and overuse of the limb. Massage adaptations for lymphedema history are even more conservative, as traditional Swedish techniques may easily aggravate lymphedema, and results may be irreversible.<sup>6</sup>

Other modifications are used for other complications of cancer and its treatments. These include

slower stroke speeds and gradual transitions when a patient is nauseated, and are more intuitively obvious than those for lymphedema or lymphedema risk. In fact, most massage contraindications for people with cancer histories are derived from clinical observations, rather than research data. Information on these practices is widely available in the oncology massage literature. A summary of precautions for massage in cancer is shown in Table 2.

### TRAINING OF MESSAGE THERAPISTS

The long-held belief that massage was contraindicated has had repercussions that continue to be felt today. Until the last decade, many therapists were even afraid to touch cancer patients. Most schools now realize the inaccuracy of this position and are reconsidering how to address this issue, but a large proportion of current practitioners were trained under the old paradigm.

Massage schools currently give a variety of messages to their students about this issue. Some instruct therapists to get approval from the patient’s doctor but do not give specific instruction or supervised experience in working with this population. Others simply offer the guideline to “massage oncology patients with care.”<sup>46</sup> Because the majority of massage training is in deeper musculoskeletal techniques suitable for a healthy population, most therapists are unclear exactly what “massage with care” means or why caution is needed. Students are intellectually familiar with diseases and conditions such as cancer and edema, but do not receive structured clinical experience with such situations. Only a handful of schools give oncology massage training within the core curriculum. By and large, most massage students become licensed without the information or experience to safely offer massage as a complementary modality for the person affected by surgery, chemotherapy, or radiation.

Thus, many therapists providing massage for cancer patients do so based on either continuing education or trial and error. The spectrum of training in oncology massage is broad, ranging from short, on-line training or distance learning with no hands-on practice or supervision, to 400-hour certification programs. Unfortunately, only a minority take training to become aware of the needs of someone going through cancer treatment or recovery.

**TABLE 2.**  
**Precautions Checklist for Massage in Cancer<sup>53</sup>**

Condition	Avoid	But you CAN
<ul style="list-style-type: none"> <li>• Solid tumor in any area that is accessible to the hands</li> <li>• Known or suspected bone metastasis, including the spine</li> <li>• Swelling or edema, including lymphedema, current or past</li> </ul>	<ul style="list-style-type: none"> <li>• Pressure on the area of the tumor</li> <li>• Pressure on the area</li> <li>• Jostling or moving the joints in the area</li> <li>• Pressure on the area</li> <li>• Positions that put pressure on the area</li> <li>• Positions where gravity increases the swelling</li> </ul>	<ul style="list-style-type: none"> <li>• Touch, hold or stroke with soft hands</li> <li>• Use moderate pressure elsewhere</li> <li>• Touch, hold or stroke with soft hands</li> <li>• Use moderate pressure elsewhere</li> <li>• Massage elsewhere, with patient comfortably positioned</li> </ul>
<ul style="list-style-type: none"> <li>• Tendency toward bruising or bleeding</li> </ul>	<ul style="list-style-type: none"> <li>• Pressure</li> <li>• Aggressive kneading or gliding</li> </ul>	<ul style="list-style-type: none"> <li>• Gentle kneading or light stroking with just the pressure used to apply lotion</li> <li>• “Holding” the body with soft hands</li> </ul>
<ul style="list-style-type: none"> <li>• Fever</li> </ul>	<ul style="list-style-type: none"> <li>• Gliding and kneading strokes with pressure</li> </ul>	<ul style="list-style-type: none"> <li>• Gliding and kneading strokes with just the pressure used to apply lotion</li> <li>• Try resting hands quietly, and imagine coolness coming through your hands</li> </ul>
<ul style="list-style-type: none"> <li>• Any identified risk of lymphedema</li> </ul>	<ul style="list-style-type: none"> <li>• Pressure or rubbing an area at risk of lymphedema</li> </ul>	<ul style="list-style-type: none"> <li>• Use moderate pressure elsewhere</li> </ul>
<ul style="list-style-type: none"> <li>• Radiation site</li> </ul>	<ul style="list-style-type: none"> <li>• Pressure or stretching the skin in the area</li> <li>• If skin is open (e.g., by scratching), avoid any contact with area</li> </ul>	<ul style="list-style-type: none"> <li>• If tolerated, contact with soft, still hands, resting over clothing</li> <li>• Imagine coolness coming through your hands</li> </ul>
<ul style="list-style-type: none"> <li>• Incision site</li> <li>• Recent surgery</li> <li>• Medical devices: IV, chemo port, catheter, oxygen mask, cannula, ostomy</li> <li>• Fragile veins or varicose veins</li> <li>• Communicable skin disease</li> <li>• Undiagnosed skin lesions</li> <li>• Removal or radiation of lymph nodes in the armpit, groin, neck or jaw</li> </ul>	<ul style="list-style-type: none"> <li>• Pressure, stretching or kneading the area</li> <li>• Positions (e.g., face down) that press or pull on the area</li> <li>• Getting lotion on devices</li> <li>• Pressure on the area</li> <li>• Contact with the skin</li> <li>• Contact with the skin</li> <li>• Pressure on the limb and the area drained by those lymph nodes</li> </ul>	<ul style="list-style-type: none"> <li>• Massage elsewhere on the body</li> <li>• Handle any device with clean, dry hands; follow doctor guidelines</li> <li>• Choose positions and pillows that ease discomfort</li> <li>• Touch or hold with soft hands</li> <li>• Ask doctor what touch is possible</li> <li>• Refer to your doctor</li> <li>• Massage with moderate pressure elsewhere on the body</li> <li>• Touch or hold the area with soft hands; no pressure</li> </ul>
<ul style="list-style-type: none"> <li>• Neuropathy</li> <li>• Changes in sensation (e.g., numbness, tingling, weakness)</li> <li>• Easy bruising or bleeding (low platelets, blood thinners, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Pressure on the affected area</li> <li>• Pressure and joint movement in the affected area</li> <li>• Pressure anywhere on the body (because of bruising)</li> </ul>	<ul style="list-style-type: none"> <li>• Use moderate pressure elsewhere</li> <li>• Report symptoms to doctor and follow her/his advice</li> <li>• Holding or stroking anywhere with light or no pressure. Ask doctor about best pressure.</li> </ul>
<ul style="list-style-type: none"> <li>• Major problems affecting vital organs (heart, lungs, kidneys, liver, brain)</li> </ul>	<ul style="list-style-type: none"> <li>• Pressure</li> </ul>	<ul style="list-style-type: none"> <li>• Massage without much pressure or moderate pressure, depending upon the patient’s tolerance</li> </ul>
<ul style="list-style-type: none"> <li>• Low white blood count (neutropenia)</li> <li>• Fatigue</li> <li>• Risk of blood clot in legs (from cancer or cancer treatment)</li> </ul>	<ul style="list-style-type: none"> <li>• Pressure</li> <li>• Pressure</li> <li>• Contact with thighs, calves, shins or tops of feet, or anywhere blood clots are a risk</li> </ul>	<ul style="list-style-type: none"> <li>• Same as above</li> <li>• Same as above</li> <li>• Massage with moderate pressure on bottoms (soles) of feet if doctor advises it</li> </ul>

Despite the hurdles, oncology massage is becoming an established specialty. The Society for Oncology Massage (S4OM) was formed in 2008 to advance the discipline.<sup>51</sup> The small but growing organization includes international members and educators and currently recognizes

instructors, provides education and resources, and hosts an oncology massage therapist locator service of members who are trained by recognized educators to specific standards.

S4OM has been working steadily to establish standards of practice and continuing education

guidelines. These standards are primarily organized around safety precautions for people with cancer and cancer histories. Membership in S4OM requires completion of a 24-hour live seminar recognized by the Society that presents information on surgery, chemotherapy, and radiation, their side effects, and how to adjust massage techniques so that the session is safe and comfortable for the patient. Some members take their education further to specialize in oncology.

### GUIDELINES FOR REFERRING PATIENTS

Currently there is a limited pool of available massage therapists who are adequately skilled to work with cancer patients. Until there is uniform training and credentialing within the profession, oncology nurses and patients can take several steps to help find practitioners with the skills to work with people living with cancer.

- (1) Look for someone with formal training in oncology massage. Use the S4OM website's locator service to look for an S4OM-recognized therapist in the area.
- (2) Interview prospective therapists about their training. Have they had a class specifically for people with cancer? Are they trained in gentle touch techniques? (See Table 1, Group A.)
- (3) Ask about experience working with people affected by cancer.
- (4) Ask about the focus of their practice. The best matches will likely be with therapists whose focus is with seniors or the medically frail, lymphatic specialists or performers of gentler types of touch therapy such as those listed in Table 1, Group A.
- (5) Be aware that therapists with practices in deep tissue bodywork, sports massage, or a chiropractic orientation may have difficulty making the adjustments needed by someone who has been through cancer treatment. They may need additional training in cancer care.
- (6) Briefly describe the patient's treatment history and ask what modifications the practitioner would make from standard massage.

### FAMILY CAREGIVER TRAINING

An important resource for touch-based supportive care is the spouse, partner, or other family member in a caregiving role. As seen in the study

of "The Touch, Caring and Cancer Program," lay caregivers can learn simple methods to safely bring comfort and relaxation to cancer patients without having to become massage therapists themselves.<sup>40,52,53</sup> The benefits attained may approach those achieved by professional therapists, especially given that more frequent use is possible in the home environment.

A key asset in such caregiver education is the motivation of the partner. Studies have documented the burden of distress borne by loved ones who feel helpless in witnessing the patient go through cancer treatment.<sup>54-58</sup> Caregiver training in simple touch techniques has the potential to (1) empower the caregiver with skills that alleviate perceived helplessness and build self-efficacy in caregiving, (2) offer the patient more frequent experience of this form of support than they might be able to access from professionals, and (3) improve the quality of the relationship by providing a meaningful and satisfying way to connect during the challenges of cancer. As one spouse stated, "Our sessions have helped maintain a level of intimacy despite my husband's chemo side effects."

Collaborations among oncology nurses, social workers, and massage therapists are using support groups and workshops to teach family caregivers how to provide the benefits of touch in supportive care at home. These initiatives foster proactive involvement by family members, are cost effective, and help overcome disparities in access to supportive and palliative care, including for underserved or low income populations.

### CONCLUSION

The massage profession and the disciplines of clinical oncology have experienced a kind of *rapprochement* over questions of safety and efficacy. There is now significant recognition of the potential contributions of massage in supportive care, as well as greater understanding of the modifications needed in offering massage to cancer patients.

Weaknesses in the evidence include studies with heterogeneous samples, limiting the ability to make definitive statements about outcomes and wide differences across studies in dosing, techniques, and the training or preparation of the interventionists. Nevertheless, massage remains one of the most popular and comforting forms of supportive care in cancer.

Beyond specific therapeutic techniques, evidence indicates that the experience of touch can convey significant benefit to patients. Thus, multidisciplinary professionals as well as family caregivers have an abundance of opportunities to contribute to patient well-being through the use

of touch in many different forms. As the field of integrative oncology matures, new initiatives are needed to further develop the evidence to more effectively leverage the potential benefits of massage and touch in both clinical and home environments.

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