Cancer, Massage, and the Myth of Metastasis

*Why Skilled Massage Won’t Spread Cancer*

A Webinar with Tracy Walton, MS, LMT

Part 1 of the Massage in Cancer Care Webinar Series

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**Background**

- Author
- Educator
- Researcher
- Massage Therapist
- Specialist in massage therapy and cancer care

Tracy Walton
The History of Massage and Cancer

An absolute contraindication to massage

Cancer → Massage

This contraindication persisted for decades.
What was this contraindication based on?

- The belief that massage ↑ circulation
- The belief that ↑ circulation would ↑ cancer spread (metastasis)

Important Terms

- Metastasis = cancer spread
- Movement of cancer cells from primary site to secondary site (another organ or tissue)
- Establishment of lesions at secondary site
Important Terms

• Certain cancers named by **primary site**, with metastasis to the secondary site
  
  – **Breast cancer** with mets to the bone
    
    *(not “bone cancer”)*
  
  – e.g., **lung cancer** with mets to the liver
    
    *(not “liver cancer”)*

Important Terms

• When cancer spreads to another organ/tissue
  
  = **Distant spread**
  
  = **Advanced disease**
  
  = **Metastatic disease**

• **Regional spread** = cancer cells in nearby lymph nodes, organs, tissues

• Cancer **staging is more complex**
  
  See [www.cancer.gov](http://www.cancer.gov) for more info
More about Metastasis

• Often cancer is “clinically silent” until metastasis has occurred
• Often not diagnosed until after it has spread
• Most common sites of metastasis:
  - Liver
  - Lungs
  - Bone
  - Brain

How Does Cancer Spread?

• Focus on solid tumor spread
How Does Cancer Spread?

• Focus on solid tumor spread

• Many steps in cancer spread

• Focus on 3 steps most relevant to massage

Cell shedding       Cell floating       Cell planting
Step 1 of Cancer Spread: Cell Shedding

Cells shed
From tumor into blood
(hematogenous spread)
or lymphatic vessel
(lymphogenous spread)

Step 2 of Cancer Spread: Cell “Floating”

Cancer cells carried through lymphatic system and bloodstream
Step 3 of Cancer Spread: Cell “Planting”

Cancer cells implant in the tissues

Under the right conditions, cells reproduce/colonize

Then the disease is considered advanced

Three Steps of Metastasis
The Role of Massage?

- Examine each step of cancer spread
- First, cell shedding

Tumor Cell Shedding

Cell shedding a function of:
  - Character of tumor cells
  - The environment around them

Millions of cells shed from solid tumors...

...only a small fraction of those are able to spread
Massage Role in Cell Shedding?

For massage to mechanically speed up shedding, it would have to satisfy **3 conditions**:

1. Sufficient **pressure**
2. Pressure applied directly at the site of the primary tumor
3. Primary tumor within reach of hands or movements

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Massage and Cell Shedding: The Reality

- Most primary tumors are too deep to reach with the hands

**Examples:** pancreas, lung, brain, liver, ovary
Massage and Cell Shedding: The Reality

- Most primary tumors are too deep to reach with the hands
  - Examples: pancreas, lung, brain, liver, ovary

- Some are more accessible
  - Examples: skin, skeletal muscle, bone, colon

Avoid Disturbing a Tumor

- No pressure over an active tumor site (if it is directly accessible to the hands)

- Care with joint movements that could disturb an active tumor site

- If the location of tumor is unclear, limit pressure everywhere to the lightest touch (“applying lotion”)
Questions for the Client

• Is the cancer active?
• Where is it in your body?
• Is it isolated to one area, or more than one?
• Any bone involvement?

Questions for the Client

• Any recent or scheduled diagnostic tests?
• Purpose of the test?
• Findings, if any?
Can massage speed up cancer cell “floating” toward the destination tissue?

Can Massage Speed Up Cancer Cell Movement ...

...by ↑ Blood and Lymph Circulation?
Two Questions

1. **Does** massage increase blood or lymph circulation?

2. If it does increase blood/lymph flow, will that promote cancer spread?

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**Does Massage Increase Blood and Lymph Flow?**

- Most of us were taught that it does
- Massage literature states that it does

But...

- Little research supports this claim
- Much research is outdated, small, poorly designed
- The evidence is not convincing
Assume massage *does* ↑ **blood** and **lymph** flow

*Could it promote* cancer spread *that way?*

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**Cancer Cell Movement through Circulation**

- **Question:** Under normal conditions, how fast does a tumor cell move through circulation?
- **Answer:** as fast as the blood or lymph carries it!

How fast is that?
How Fast do Blood and Lymph Flow?

**Lymph** takes 1-24 hr to travel from capillary or node to bloodstream.

**Blood** takes about 1-2 min to complete a circuit.

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How Much Faster Can **Blood** Move when Massage is Applied?

- Hard to improve on 1-2 minute circuit time
- Even if massage *did* speed it up, it would just send blood more quickly in circles
- Metastasis not dependent on blood flow rate
- Metastasis is complete only when cancer cells *leave* the circulation, plant, and form new lesions in new tissues
- The **Exercise Argument**
The Exercise Argument

If increased blood circulation did ↑ cancer spread, other circulatory activities would also ↑ risk

Cancer care does not prohibit exercise

Patients typically encouraged to exercise

If exercise is considered safe, then massage should be safe

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How Much Faster Can Lymph Move when Massage is Applied?

- Normal lymph flow rate (from capillary/node to duct): 1-24 hrs
- Again, exercise facilitates lymph flow
- Patients typically encouraged to exercise

If exercise is considered safe, then massage should be safe
Can Massage Speed Up Cancer Cell “Floating?”

Answer:
*If* massage increases circulation, it would only send cells “around in circles” more quickly.

Cell “Planting” (Implantation)

- Cancer cells move from blood vessels to tissues
- Reproduce/colonize
- A function of **tissue affinity** between cancer cell and surrounding tissue
- Implantation is **not** thought to be a **mechanical** process
Can Massage Speed up Implantation?

• Implantation a function of tissue affinity

• Mechanical force not considered a factor in implantation

• Implantation unlikely to be affected by massage

Summary
Avoid disturbing a tumor site
No direct pressure; no joint movement

No medical concern about cancer spread through increased circulation
Mechanical force not thought to ↑ implantation
Where Does This Leave Us?

then

vs.

NOW

"Massage therapy is not contraindicated in cancer patients. Massaging a tumor is, but there is a great deal more to a person than the tumor."

--Bernie Siegel, MD
“Borrowing the Medical Concern” in Massage Therapy

• In **medicine**, there *is* concern about disturbing a tumor site

• In **massage**, we should also be concerned about disturbing a tumor site, and be careful not to disturb it

• In **medicine**, providers are **not** concerned about ↑ cancer spread through ↑ circulation

• In **massage**, we should **not** be concerned about ↑ cancer spread through ↑ circulation
“Borrowing the Medical Concern” in Massage Therapy

• There is no concern in medicine that movement or pressure affects implantation.

• In massage, we should not be concerned about massage movement or pressure affecting implantation.

“Borrowing the Medical Concern” in Massage Therapy

• If concern did exist in medicine/nursing, massage would not be at major cancer centers

• Massage use is ↑ in these facilities

• Massage typically provided by MTs with specialized training/knowledge
How Do We Respond when Asked, “Will Massage Spread Cancer?”

- Skilled massage will not spread cancer
- Concern based on an old myth
- The Exercise Argument

How Do We Respond when Asked, “Will Massage Spread Cancer?”

- Massage is offered at cancer care centers and clinics around the world
- Avoid claiming that research shows massage will not spread cancer.
Other Safety Precautions

• Massage adapted to
  – Active cancer
  – Current treatment
  – Lingering/long-term effects of treatment

• Society for Oncology Massage
  (www.s4om.org)
The Scope of This Webinar Series
“Massage in Cancer Care”

• Share information
• Introduction to key issues and massage adjustments
• Appreciation of the complexity of cancer, treatment, and effects on the body
• Overview of literature resources
• Introduction to other resources—the Society for Oncology Massage and recognized training

Essential Resources for Practicing Safely with People with Cancer and Cancer Histories


Learn more at www.tracywalton.com
Essential Resources for Practicing Safely with People with Cancer and Cancer Histories

Walton, T. Cancer & massage therapy: contraindications and cancer treatment. Free download, link at www.tracywalton.com

Essential Resources for Practicing Safely with People with Cancer and Cancer Histories


The Society for Oncology Massage

www.s4om.org

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Massage in Cancer Care

2. Cancer, Massage, and Symptom Relief: What does Research Tell Us about the Benefits of Massage?
3. Cancer, Massage, and Safety Essentials: How is Oncology Massage Unique?
6. Cancer, Massage, and Detoxification Does Massage Have a Role, or Not?

Other Webinars Available on Demand

Unraveling the Mystery of Low Back Pain
Unraveling the Mystery of Shoulder Pain
Unraveling the Mystery of Cervical Pain
Unraveling the Mystery of Knee Pain

All Webinars Available at www.benbenjamin.com
References


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