2026 S4OM/ S4OE Healing Summit Recording

[00:00:00]

[00:00:00] Summit Opening

Ericka Clinton: Good morning community. Welcome to the Virtual Healing Summit, brought to you by the Society for Oncology Massage and the Society for Oncology Aesthetics. My name is Erica Clinton and I'm the President for the Board of Directors. I wanna start off by thanking everyone for joining us for this day of learning and sharing.

Ericka Clinton: The mission of each Healing Summit is to create a platform for practitioners, clinicians, researchers, and other professionals where we can engage in meaningful discussion on research and explore best practices for oncology, massage and oncology aesthetics. S four OM, and s four OE. We are deeply passionate about the role of massage therapists and estheticians in cancer care.[00:01:00]

Ericka Clinton: We hope that you will find this virtual summit clinically relevant and personally inspiring. Our goal is to highlight the significant impact that massage and aesthetic care can have on patients, caregivers, and healthcare professionals during cancer treatment through recovery and survivorship. As an organization, S four OM, and S four OE continue to thrive.

Ericka Clinton: Our community of preferred practitioners has grown to over 400 in the last three years. This is significant as our numbers drop below 200, post the COVID-19 pandemic. I congratulate the professionals that have embarked on oncology massage education and join the ranks of preferred practitioners, and huge thanks to the number of PPS who [00:02:00] returned to S four OM.

Ericka Clinton: Your commitment to the organization is greatly appreciated. I am happy to say we are continuing to grow through the addition of new educators to both S four OM, and s four OE, and are excited for the return of our supplemental class listing on our website. Events like this take a lot of work to produce successfully.

Ericka Clinton: S four OM and S four OE would like to thank the sponsor of the Virtual Healing Summit. Blue Beauly, makers of the finest skincare on the planet, Blu aspires to be the maker of the most wholesome, efficacious, and sustainable skincare in the world. It is their fervent belief that in the 21st century, businesses can no longer focus on financial [00:03:00] performance alone.

Ericka Clinton: They must be mindful of their obligations to the environment, local communities, and distant lands that are impacted by their business operations. Three key principles underpin every intention, decision, and action. At Blue Beauly, one, embrace nature as the true and only source for health and beauty. Two, respect the planet and all living beings.

Ericka Clinton: And three, operate with the utmost transparency, authenticity, and integrity. And we are so grateful to have the support of a company like Blue Beautify. We also were very, very lucky and received several practitioner champion sponsorships from individuals who graciously gave to allow others to participate in this learning experience.

Ericka Clinton: We cannot thank them enough for their generosity. [00:04:00] This summit will provide each learner with continuing education credits from the National Certification Board for therapeutic massage and body work to ensure that you receive your CE credits during our closing, there will be a link in the chat to a form that must be completed to receive your CE certificate.

Ericka Clinton: This conference is intended for massage therapists and aesthetic professionals for education purposes only. The sessions presented may cover a wide range of techniques, some of which may fall outside the legal scope of practice for certain attendees, depending on their individual training, certification, registration, licensure and jurisdiction is the sole responsibility of each participant to understand and comply with the scope [00:05:00] of practice.

Ericka Clinton: Defined by their local licensing board or regulatory authority. Attendance in a class does not grant legal permission to perform the techniques taught. Please enjoy the amazing presenters and sessions. Each session will be followed by a question and answer period where we look forward to your participation now onto the summit.

[00:05:28] Empowering Tomorrow: How Mindful, Intentional Practice and

Meaningful Collaboration Have Shaped My Path as a Clinician, Educator, and Advocate with Cara Thurman

[00:05:28] Welcome and Intro

Cara Thurman: Hello and welcome to the S four OMS four OE Virtual summit. We're so excited to have you here. Thank you for spending your time with us today. My name is Kara Thurman. I'm gonna share a little bit about my story as an oncology massage therapist. I am a nationally certified. Massage therapist. I am licensed in the state of Georgia right now and I specialize in oncology, massage therapy at Vinney.

Cara Thurman: Massage and Wellness. [00:06:00] We have a brick and mortar in the, in the city of Atlanta, but we also have hospital teams. Inside the hospital systems in the state of Georgia. We partner with local and nonprofits. One of our biggest parts of our mission is to provide low and no cost. Oncology massage therapy to patient survivors and caregivers, and I am the proud leader of the oncology massage team here at Bindings Massage and Wellness.

Cara Thurman: I'm gonna share a little bit of my story with you today, and my hope is that what you'll take away is just the care that we need to think about for the people who do this work. How we can share the, the weight of this work, what equity and inclusion really means in this work, and how presence and support and collaboration can really change how we all work together.

[00:06:57] Heart Failure Reality

Cara Thurman: So let me start with the [00:07:00] fact that I am an, a active heart failure, not someday and not in theory, but now I start here. It strips everything down to what actually matters and to why. I understand the work the way I do. I wanna take you to a moment when the future felt fragile and I was a brand new mother.

Cara Thurman: Standing between fear and love. I was lying in a hospital bed, newly diagnosed with heart failure in a body shaped by a lifetime of a severe congenital heart defect at home was my 13 month old son. I had only just begun to understand what it meant to be his mother and suddenly time collapsed.

Cara Thurman: I wasn't thinking about the next year or five years from now, everything narrowed to these questions. Would I get to see my son grow up? How much time would I get to be his mother? [00:08:00] I remember staring at the ceiling doing the quiet math that no one wants to do. Will I see him graduate high school?

Cara Thurman: Will I watch him fall in love? Will I meet the person he becomes in this world? That kind kind of clarity is ruthless, and I gotta be honest. It's deeply intimate, but that moment didn't come out of nowhere.

[00:08:23] Surgery and Finding Susan

Cara Thurman: Two years earlier, I had gone through my fourth open heart surgery. It was a 12 hour deeply invasive procedure.

Cara Thurman: The surgeons rerouted blood from the right side of my heart directly to my pulmonary artery to try to give that failing side of my heart some relief. They scraped scar tissue from my heart muscle, and they replaced the conduit that functions as my tricuspid valve. My body was wrecked at the same time.

Cara Thurman: That surgery gave me something extraordinary. It gave me the chance to become a mother, to live into my forties [00:09:00] to be here doing this work. In the months that led up to that surgery, I was in and out of the hospital. My nervous system was in constant overdrive, fight or flight 24 hours a day. My boyfriend at the time would leave for work after spending nights with me in the er, both of us exhausted and out of answers.

Cara Thurman: At one point out of pure helplessness, he said, maybe you should find a massage therapist, someone who can help you feel better, and help you get ready for what's ahead. And that's how I found Susan. She wasn't formally trained in oncology massage, but she immediately understood something that was essential.

Cara Thurman: My nervous system needed care. She worked gently, slow, intentional touch, energy work, and deep presence. She helped me find steadiness in the middle of [00:10:00] fear. She helped me prepare not just physically, but mentally and emotionally for what I was about to go through. And she didn't just care for me. She cared for my people, my boyfriend, who became my fiance, and eventually my husband and my mother, who had sat with me throughout my life in hospital rooms.

Cara Thurman: They were both carrying fear, love, and a deep sense of helplessness, loving me without being able to change what was happening. After the surgery, Susan stayed with me in this work, gently helping with me with the pain that comes with this type of recovery, with range of motion, with ups and downs of long-term serious disease, meeting me exactly where I was every single day.

Cara Thurman: She may not have had the formal training in oncology massage therapy, but I can promise you she was [00:11:00] doing the work. And it changed my life during my four month recovery.

[00:11:06] Becoming a Therapist

Cara Thurman: as the pain medicines began to wear off and my body slowly started to heal, I knew clearly and without question, this is what I wanted to do.

Cara Thurman: I wanted to do this for patients, what Susan had done for me. I found a massage therapy program that included entry-level oncology training, and 11 months later I began my career.

Cara Thurman: But starting this work wasn't simple. It took years, years of hearing, no years of unanswered calls, ignored emails, and me showing up anyway. Years of working on my skills without being able to fully use my oncology training, years of continuing education to build the depth of understanding that I knew this work required.

[00:11:59] Building a Hospital Program

Cara Thurman: And then [00:12:00] in 2012, I opened Vining's Massage and Wellness, just me as a solo practitioner. I spoke directly to oncology patients and they found me. As my practice grew, my clients connected me to my first hospital contract. What started as a few hours of chair massage grew into a multi-day program chair, massage, infusion center work, and eventually bedside care.

Cara Thurman: We built the capacity to go into inpatient rooms, receiving referrals from oncology, palliative care, and surgical teams. As the work deepened, so did the weight of it because this work asked so much of us, and I could feel even then that there would come a time when my body would no longer be able to carry it in the same way.

Cara Thurman: This is not abstract for me, [00:13:00] so I made the decision. I could see clearly that this work built. By so many before me has never been meant to rest on one person, and it could not depend on me alone to carry these programs we had started in Atlanta, they had to be stronger than my body. They had to outlast me.

Cara Thurman: I didn't wanna carry this alone, not for my sake, not for the patients, and not for the sustainability of this work. So I began building a team. Something that could hold both the depth of care patients need and the support practitioners deserve something that can continue, that can grow and that can reach more people, even when I no longer can.

Cara Thurman: Again, this work is not abstract for me. I have lived it, I have needed [00:14:00] it, and I have built my life around it, and I understand it deeply. Around that same time, I found myself moving between two worlds. In many ways, they were very similar. I was sitting in hospital rooms, sometimes as a patient and sometimes as a practitioner, beginning to understand in my own body what so many of the people we serve already know the future can quickly become uncertain.

Cara Thurman: This makes it so precious to be fully seen in the present. I would leave my own hospital bed and return to the treatment room sitting with clients I had known for months, sometimes years, as their body shifted towards the end of life. These weren't brief encounters, these were relationships. I was walking alongside people as they said goodbye to the futures they once believed were [00:15:00] guaranteed.

Cara Thurman: At the same time, I would go home and hold my child at night carrying the quiet awareness of how deeply meaningful these moments were. What struck me at that point was this, we are all living inside the same truth. Even if our diagnosis are different, the future is not promised. What matters most is how we are held.

Cara Thurman: Now, that clarity, born out of fear, love, and a deep uncertainty has never left me. It changed how I practice. It changed how I build systems, and it has changed what I believe. We owe one another when the work we do asks us to carry so much.

[00:15:50] Why This Work Matters

Cara Thurman: Because much of this work doesn't fit on a chart, oncology massage therapy is not a luxury.

Cara Thurman: It is a [00:16:00] trauma-informed relational care. Oncology massage therapy lives in the space between clinical precision and human connection. It requires us to understand ports, neuropathy, lymphedema risk, bone metastasis, low platelets, radiation sites, and surgical recovery. But it also requires us to adapt moment by moment to bodies that are constantly changing, but just as importantly, it asks us to sit in the spaces that no one else wants to sit in.

Cara Thurman: To build long-term relationships with patients across treatment, remission, recurrence, and all too often the end of life to be present in hospital room hospice rooms to hold the stories that patients don't tell their families to witness grief over and over [00:17:00] again without always having a place to put it.

Cara Thurman: For a time I carried that weight alone. There were no other massage therapists around me who truly understood what it meant to do this work in these environments. No shared language, no real support, just the quiet, cumulative weight of showing up again and again. Over the years, I've dedicated my work to changing that.

Cara Thurman: I spent decades in oncology and trauma-informed care, working alongside nurses, social workers, physical and occupational therapists, and integrative medicine teams to deliver safe, coordinated touch in complex medical environments. I've built and led programs, developed protocols and trained practitioners, not just to do the work.

Cara Thurman: To [00:18:00] sustain it, to make it reproducible, to make it trusted, to make sure no one else has to carry this alone. And here's what I know to be true because of this work, patients sleep, they eat, they tolerate treatment better. They breathe more fully. Their pain drops a notch. Their anxiety loosens its grip.

Cara Thurman: And if we're lucky, sometimes just sometimes they remember they are more than just a diagnosis.

Cara Thurman: What we do is not about the disease, it's about the person living inside of it and yet so much what of what we carry is invisible. The emotional weight, the physical, the psychological intimacy, the physical exhaustion, the outcomes that don't always show in the data, [00:19:00] but that matter deeply in human life.

Cara Thurman: So if you've ever wondered whether your work matters in a system that doesn't always measure it. I want you to hear this clearly. It 100% does it matters more than we have language for.

[00:19:21] Access and Sustainability

Cara Thurman: From the beginning, I felt called to build something that could truly hold this work. Something that honored both the people receiving it and the people providing it.

Cara Thurman: I understood even then that these were not separate goals, but part of the same vision I set out to create a professional oncology massage therapy program, grounded in clinical excellence, steady compassion, and deep commitment to expanding care, access to care. I wanted more patients, more survivors. More [00:20:00] caretakers to experience safe evidence-informed oncology massage without the unnecessary barriers care that meets them where they are in the most vulnerable moments of their lives.

Cara Thurman: And at the same time, I was committed to building something just as meaningful for practitioners. A place where they could thrive, not just emotionally, but financially and professionally. A model rooted in support. Clarity and shared standards, one that honors the skill, responsibility, and dignity of the practitioner and allows them to stay in the work for as long as they want.

Cara Thurman: Because I believed, and I still believe that when we care for both, we create something stronger, something sustainable, and something that can truly hold all of us. As a practitioner myself, I knew the value of long-term sustainable [00:21:00] job, the kind that lets you continue to do this work without sacrificing your body, your health, or your family.

Cara Thurman: And I also knew how uneven access to those jobs can be. Equity and inclusion in this work cannot stop with patients. They must extend to practitioners. Because if only certain people can afford to do the work, if sustainability is reserved for those with financial cushions or outside support, then our systems aren't inclusive no matter how compassionate they appear.

Cara Thurman: Access to meaningful, supported jobs is one of the most important forms of equity that we can offer. Jobs that allow practitioners to create, to care deeply and to support themselves and their families. Jobs that welcome people from different backgrounds, life experiences and identities, not

by asking them to sacrifice, [00:22:00] but by building structures that allow them to thrive.

Cara Thurman: I am deeply committed to providing low and no cost, oncology massage therapy to patients, caregivers, and survivors. These goals are not in conflict. They are part of the same equation. Access for patients, sustainability for practitioners. This is not an either or.

[00:22:26] The Solo Model Trap

Cara Thurman: This is the work, but here's the tension.

Cara Thurman: I've seen this and I've lived it over and over. The way we were trained versus what actually works, we were told be independent. Be your own boss. Work alone, charge hourly. Don't rely on anyone. And on the surface that advice. Advice feels really good. Solo work can feel faster, easier, more controlled, and in the moment it can feel liberating.[00:23:00]

Cara Thurman: Here's the truth. Easier doesn't mean more effective, and it doesn't mean sustainable. The cost of solo work is real burnout, financial instability, emotional isolation, and retiring from this work way too soon. As massage therapists, we weren't trained to build systems. We were trained to survive inside of them.

Cara Thurman: I want every practitioner hearing this to know you are not weak for feeling the strain. The model isn't sustainable and it never has been. That's why we built something different in Atlanta, a place where the work can be deeply meaningful and truly sustainable for the people giving it and for the people receiving it.

Cara Thurman: Because when access for patients. Aligns with sustainability for practitioners. That's when the work [00:24:00] becomes real and that's when the work can be lasting. There was a point in my journey when I realized something I hadn't fully named yet, but I could feel it. This work I cared so deeply about was not meant to be carried alone.

Cara Thurman: In the early years, I did what so many of us do. I showed up wherever I could. I said yes to opportunities. I worked hard to build trust, to learn to grow, and to bring this work into spaces where it really wasn't always understood.

[00:24:34] Mentors and Teaching

Cara Thurman: And alongside that, I kept investing in my own education, learning from places like Greet the Day from Tracy Walton and Associates, and from the Oncology Massage of the Carolinas.

Cara Thurman: And I also was attending conferences held inside leading cancer centers like MD Anderson. I was hungry to learn, but at some point learning for itself stopped feeling for myself, [00:25:00] stopped feeling like enough. So as soon as I could, I began bringing team members with me. Not because it was easy and definitely not because it was financially comfortable, but because something in me knew that if this work was going to grow in a meaningful way, we had to grow together.

Cara Thurman: I wanted us to share a common language, a common standard, a shared sense of responsibility for the care we were providing along the way. I've been deeply supported by mentors like Lucy Allen and Carolyn Teague, people who saw me clearly guided me generously and shaped the way I understand this work.

Cara Thurman: For that, I am deeply grateful. They helped me see something that shifted my trajectory entirely. The knowledge I was gathering didn't just need to be practiced, it needed to be taught. The realization led me to develop my own oncology [00:26:00] massage therapy continuing education course, and eventually I became NCBT and B certified to teach that course.

Cara Thurman: Teaching became another way of extending the work of strengthening not only individuals, but the collective.

[00:26:17] Collaboration Builds Systems

Cara Thurman: And while all of that was unfolding, I began stepping into hospital systems, building, patient facing oncology, massage programs one at a time. I often found myself sitting at tables where massage therapy wasn't always clearly understood.

Cara Thurman: I was learning how to translate what we do into language that physicians, nurses and administrators could trust. It wasn't fast and it wasn't easy, but it was steady. Relationship by relationship. Conversation by conversation trust was built and then something began to happen. [00:27:00] People started to see the work, not just hear about it, but truly see its impact.

Cara Thurman: The programs began to grow. We expanded into infusion centers, into inpatient settings, and together we began receiving referrals directly from oncology and palliative care teams. Those referrals meant something. They meant we were no longer working adjacent to care. We were becoming part of it. At the same time, I began reaching out to nonprofit organizations.

Cara Thurman: But instead of bringing a fixed model, I came with questions. I listened. I paid attention to each what each organization needed, and we together built programs that aligned with their mission rather than asking them to adapt to ours. Every partnership became its own ecosystem. Designed to create real value for the organization and real [00:28:00] access to care for the people who they served.

Cara Thurman: Over time, what emerged was something much larger than a collection of individual efforts. It became a system of professionalized programs, programs that hospitals could rely on, not just appreciate. Because what healthcare systems ultimately need is not just passion. They need structure. They need coverage so that patients are supported consistently.

Cara Thurman: That consistency is needed, so the care is delivered with a shared training and standards. They need professional accountability and they need continuity of care so that that care doesn't exist in isolated moments for those patients. But across the patient experience, these are not things one person can sustain alone.

Cara Thurman: These are things that require a team. That's where the shift happened for [00:29:00] me. I began to understand that collaboration wasn't a limitation. It was an expansion. It wasn't about giving up independence or losing identity, or becoming less of an individual practitioner. It was about multiplying what was possible.

Cara Thurman: Because alone we can support dozens of patients, but together we can change how care is delivered, and that's really the invitation today. I want each one of you to consider that there may be another way to do this work, one that doesn't require you to carry it alone. One that allows you to build something sustainable, something collaborative, something that extends beyond your own capacity, that way exists.

Cara Thurman: It's possible, and it's already unfolding here in Atlanta. The [00:30:00] question is how might you step into it?

[00:30:05] Invisible Labor and Value

Cara Thurman: In the last few years, my work has expanded again beyond my own teams and into a wider community. I've had the opportunities to speak at conferences, to teach virtually and to collab, collaborate with nurse practitioners and other healthcare professionals to build programs that are clinically sound trauma informed and scientifically grounded.

Cara Thurman: And through it all, one truth has remained constant. Much of the work we do is invisible. Massage therapy and caregiving in its fullest sense requires a steady, grounded presence. It asks for deep listening, nuanced understanding, and a level of attentiveness that cannot be easily measured or reduced to metrics.

Cara Thurman: And because it is difficult to quantify, it has historically [00:31:00] be un been undervalued and underfunded. Often sustained by unpaid or underpaid labor. Don't get me wrong, volunteerism has its place, it always has, and of course it always will. But when care depends on sacrifice to exist, we have to ask, what is it costing the people who are giving it, because as we all know, this work carries weight.

Cara Thurman: Emotional weight, physical weight, moral weight. And when we fail to name that we fail, the people who are carrying that weight every single day. The clarity I gained in those early years lying awake next to my child, sitting bedside with patients, learning what uncertainty felt like from the inside out has never left me.

Cara Thurman: It continues to shape how I teach, [00:32:00] how I practice, and how I lead. It's also why this work has become so deeply personal in a different way because I don't stand here only as a practitioner or someone building systems of care. I also stand here as a patient living in a body that like all bodies will require more care over time.

Cara Thurman: With the understanding that my need for that care will likely come sooner and with more intensity, and that changes how a person sees things, builds things. It moves the focus beyond immediate solutions and towards long-term responsibility toward what will continue to support us when the roles inevitably shift.

Cara Thurman: Because I'm not only building this, these programs for those I serve today, but for the [00:33:00] care I know I will need throughout my life as my heart continues to require more support over time. As my condition evolves,

my heart will require increasing support, and over time, that strain will extend beyond my heart and affect other systems in my body.

Cara Thurman: I will need this kind of care more, and I share that not as something tragic, but as something clarifying. This is about sustainability. This is about continuity, and it's about access. This is about dignity for every person receiving care and for every practitioner providing it. It's about building systems that don't depend on individual sacrifice to survive systems that are strong enough, supported enough, and valued enough to last.

Cara Thurman: Because the truth is, this isn't just my story. [00:34:00] Every one of us. Will at some point find ourselves on one side of the table or the other. We will be the ones offering the care, and we will be the ones in need of it. So the question becomes, what are we building now that will hold us later? This story is an invitation, not just to do the work better, but to take better care of the people who do this work.

Cara Thurman: To build systems rooted in equity, inclusion, dignity, and sustainability, where both patients and practitioners are able to thrive. So to every integrative oncology practitioner, including massage therapists and estheticians, this work is bigger than any one of us, and when we collaborate with integrity, clinical rigor, and deep respect for the human experience.

Cara Thurman: [00:35:00] We reduce barriers, we elevate standards, and we create a continuum of care that truly honors the whole person. Because how we care for people at their most vulnerable reveals what we truly value. And this is not hypothetical, this is real. What I have come to understand through illness, through motherhood, through grief.

Cara Thurman: Through this work is that care is never just about the person on the table. It never has been. It's about everything surrounding that moment. The systems we build, the structures we rely on, and the people quietly caring what cannot be measured. The emotional weight, the physical presence, the ethical responsibility of showing up again and again in spaces where outcomes are uncertain.

Cara Thurman: [00:36:00] Our presence matters, and for a long time, much of this has gone unseen, but when something remains unseen. It becomes undervalued, and when it's undervalued, it is, it becomes unsustainable. So if we're serious about access, I mean truly serious, then we have to be just as serious about the people providing the care.

Cara Thurman: Because equity doesn't stop with the patient. It extends to the practitioner to whether they continue to do this work. To whether they support their families and their lives to whether they can bring their full humanity into the room without sacrificing themselves to do it.

[00:36:48] Invitation and Next Steps

Cara Thurman: This is the moment where something can change, and not just in theory, but in practice.

Cara Thurman: Because systems don't change all at once. They [00:37:00] change for the decisions we make. So here's the invitation. Not to do everything differently tomorrow, but to build something and not to build something massive overnight, but to take one small, brave, doable step if collaboration feels uncomfortable. That makes sense.

Cara Thurman: Most of us were taught to do this work alone, but what if that's the very thing that needs to shift? So before you leave here today, I want you to choose one action. You could identify one practitioner you could collaborate with. You could start one conversation with an allied health professional. Or you can ask one new question, maybe a question like, where could I collaborate to make my work stronger, to make my practice stronger?

Cara Thurman: And that's it. Because it doesn't grow through [00:38:00] pressure, it grows through connection. Through reaching out, through being willing to not do this alone through finding each other. And when we do that, when we begin even in small ways to share the responsibility of care, we don't just support each other. We change what is possible for ourselves, for our patients, and for the future of this work.

Cara Thurman: And if you take anything with you today, I hope it's this, your work matters. Your presence matters not just for the people you serve, but for the systems. We are all together shaping, and you are not meant to carry this alone. The care we offer our patients, that presence, that attentiveness, that humanity.

Cara Thurman: It's the same [00:39:00] care we must offer each other. And when we do that, when we begin to support one another with the same intention we bring into that room, this work does, doesn't just continue. It becomes sustainable, it becomes shared, and it becomes something that can truly hold all of us.

[00:39:23] Closing Thanks

Cara Thurman: Thank you so much for joining me here today.

Cara Thurman: I look forward to speaking with you in the question and answer section.

[00:39:32] Head and Neck Cancer 101 with Holly McMillian

[00:39:32] Welcome and Reset

Holly McMillan: Hi everyone.

Holly McMillan: Thanks for joining me today. My name is Holly McMillan, and today we'll be discussing a range of topics for head and neck cancer 1 0 1 from oncology treatment for head and neck cancer through therapeutic recommendations and adjustments to treatment plans, as well as some updated research in this field.

[00:39:52] Disclosures and Content Warning

Holly McMillan: Okay, so diving right in for disclosures, I am an employee of MD Anderson Cancer Center. There are graphic [00:40:00] photos contained within this presentation. And all patient images that you see today are provided with patient permission and they have been shared in order to improve education. So I do ask that no photos are taken of the patients in this lecture.

[00:40:17] Head and Neck Cancer Stats

Holly McMillan: So starting out it's important to discuss all cancers in the United States so that we can really understand where head and neck sort of fits in this big larger picture of cancer. So in the United States for 2025, there are gonna be over 2 million new cases documented with over 600,000 deaths, and there are over 22 million existing cases of cancer within the United States.

Holly McMillan: So where does Head and Neck fit? Where do we belong in that? In that large number. And if you see here in this graphic in the United States from 1975 to 2021, when we break it down between male and female we can see the top seven to eight cancers here. And as expected male, the leading [00:41:00] cancer is prostate, and for female, the leading cancer is breast.

Holly McMillan: But what you won't see here are head and neck cancers ranking in the top eight.

Holly McMillan: Moving into projections updating from 2021 to 2025. Unfortunately, the number of cancer patients for head and neck has increased, and now it's ranked in the top 10 for men. And in fact, it's number eight while it's number 13. For women overall. Head and neck cancer is the 12th most common malignancy.

Holly McMillan: While it only ranks about 4% incidents, so of all new cancer cases, it's only about 4%. When you look at the raw number though, that number is over 42,000. So while it's small in percentage, it still ranks quite high in the number of individuals diagnosed with head and neck cancers. And again, that number is for male only.

Holly McMillan: So we have the addition of females as well. Over 90% of these head and neck cancers are diagnosed as squamous cell carcinoma.[00:42:00]

Holly McMillan: And we look at prevalent or existing cases. So these are the patients that are on our caseload. Most likely. These are patients that still have head and neck cancer. They're dealing with the effects we can see in 2025. For males, that number is over 300,000 patients. That number is only projected to increase over the next decade.

Holly McMillan: So for 2035, they're projecting over 400,000 cases of patients living with head and neck cancer. So these numbers just continue to increase and rise again, leading with males. We still have the addition of females as well. So more statistics for head and neck cancer, I think that are important are that 72% of these cancers are oropharynx, HPV positive.

Holly McMillan: We'll talk more about HPV in just a moment. Compared to 2022, there's been an increase in incidence rates. So more and more new cases are arising almost 6,000 additional cases per year. And there's also about 1500 increase in deaths per year, the crude average. So when we [00:43:00] just look

at everything together, the five year survival is about 70%, which is an increase by three.

Holly McMillan: So that's fantastic news. Survivorship rates are increasing. Head and neck cancer is more common in men than women. For about a three to one ratio, the median age of diagnosis is 65. So just about retirement age. And in terms of race and ethnicity, we do see predominantly non-Hispanic white males as well as American Indian and Alaska native.

[00:43:34] Anatomy and Key Subsites

Holly McMillan: So the anatomy and physiology of the head and neck is quite unique. We have a very interesting landscape. People sometimes confuse what is actually head and neck. A lot of folks think it's just sort of everything north of the collar bone, but it is quite specific. It's just the upper aero digestive track.

Holly McMillan: So those borders include superiorly, we go all the way to the skull base, inferior down to the [00:44:00] trachea, but not including the trachea anteriorly to the nose and posterior to the pharyngeal wall. So we can sort of see, I don't know if you can see my mouse here, but we're outlining this area here

Holly McMillan: and what's not head and neck. Sometimes it's thought of as head and neck, but it's actually not. Is the esophagus, the cervical spine, the lungs, the trachea and the brain, those are all discipline specific with their own group of specialists. So anatomic regions within the head and neck we have the oral cavity, the pharynx, and the larynx.

Holly McMillan: It's important. I just wanted to highlight some of these subsites that you may see. When patients come in, they may tell you about these subsites or you can read about it in your reports. So for oral cavity, we have the actual lingual tongue, the oral tongue that you see in the mouth, the floor of mouth, so sort of the hammock beneath it, the gum line, the mandible and maxus.

Holly McMillan: So the bones, retromolar, trigone, that area behind that mandibular molar that sort of sweeps up. [00:45:00] And then the cheek and the lips. Pharynx is quite large, and it includes the nasopharynx, the oropharynx, and the hypopharynx. So it's broken down into three regions. And then from there we also have subsites.

Holly McMillan: So most commonly what you'll hear about is oropharynx being the tonsil in the base of tongue. That's, again, a primary region for HPV related cancers, but as well as the soft palate and posterior pharyngeal wall. Hypopharynx is down below. This is the piriform sinus of the opening right before your esophagus, post cricoid region and posterior pharyngeal wall.

Holly McMillan: And then we have the larynx, so the area just above, right at the level of the vocal cords and just below that space.

[00:45:42] Function and SLP Views

Holly McMillan: And why do we care? Right? Why is head and neck so important to so many of us? Not only are these patients just absolutely fabulous but head and neck is really responsible for a lot of key functions.

Holly McMillan: Breathing is pretty important and as well as communication and swallowing. So when communication and swallowing are affected and taken off the [00:46:00] table the data show quality of life, quality of life really suffer.

Holly McMillan: So as a speech pathologist, I also have some unique views of the head and neck, and I'd like to share those with you today. I don't know how common this access is for you, but I, I find it fascinating. And if you ask you or patients, or your clients for this information, they likely have these recordings if you want to see it to help with your treatment planning.

Holly McMillan: So this is laryngeal Stroboscopy, so this is when we take that camera down through the nose, we'll scoot it along the floor of the mouth. We will come at come out back here by the palette and we're looking down. So it's a top down view into the pharynx and into the larynx. We're using a flashing strobe light to slow down the waveform of the vocal cords here, just so we can see them with the naked eye.[00:47:00]

Holly McMillan: So here we can see these white bands. Those are in fact the vocal folds. We have the OIDs at the top of your screen, and this is really just the laryngeal vestibule and this is what it should look like. Another interesting view is the modified barium swallow study. Your patients will absolutely have these so pretty neat test that you can ask to see, again, just to look at the lateral sort of view, but you can see them under function, how these structures and soft tissues are moving.

Holly McMillan: So just to orient you, I'm gonna have that patient regurgitate that. There we go. So we're, we can see the spine we can see the, the base of the skull here. The jaw, the black material that you're going to see go down is actually white, and it's called barium, but it shows up black for us under fluoroscopy.

Holly McMillan: So we're looking at swallow function in the mouth, in the oropharynx, and then down into the pharynx and the esophagus. This is thin liquids. [00:48:00] You can see how quickly that fold goes down. This is pudding and you can see everything moving quite clearly down the way that it should into the esophagus from the oral cavity.

Holly McMillan: This is the last unique view, but this is fiber optic endoscopic evaluation of swallowing. We call it fees. And again, this is a normal looking swallow exam here. This sort of horse shape that you'll see here from that top down view. Again, we've come along the floor of the nose. Looking down is the epiglottis.

Holly McMillan: We'll look right now, we can see the entire pharynx and we'll scoot down here into the larynx.

Holly McMillan: I'm gonna take a peek

Holly McMillan: still that you can see things move as the patient is talking. So again, this is his voice box here. Larynx first looking forward. Okay. Alright. One more time. You doing okay? Yeah. Another drink. So when [00:49:00] the patient swallows, we see a white out. All the tissue comes together for that split second. It closes off the camera and then it opens back up.

Holly McMillan: You'll see a white residue left behind. That's just the residue from what he has swallowed. Take a drink, hold it, and swallow. Go ahead.

Holly McMillan: Pretty unique view and if you have access to those from your patients, again, they can help with your treatment planning for functional outcomes. This is just for your reference for visualization of anatomy. I've listed all the substructures off to the side and then what the view looks like if you have access to endoscopy or fluoroscopy, just for you to preview later if it's helpful.

[00:49:43] Risk Factors and HPV

Holly McMillan: So, risk factors for head and neck cancer, we have the big three. Tobacco smoking prevalence is about 20% of the US population. The good news is smoking cessation efforts are helping and there is a massive decrease in actually the amount of smokers we see decade over [00:50:00] decade. There is over a 10 times increased mortality rate from cancer for smokers.

Holly McMillan: Alcohol. So by itself, alcohol is actually a weaker independent risk factor, but when it's combined with tobacco, the risk increases. And then human papillomavirus or HPV. So this is a causal risk factor by itself. You don't have to be a smoker or a drinker. You can h have head and neck cancer just because of HPV.

Holly McMillan: We'll talk more about better survivor rates and non-smoker younger cohorts next. So it's interesting, we've just come out of a pandemic, but we've been going through an epidemic for quite some time of the last couple of decades, and it will likely continue to occur here. We see a rising increase in the number of patients with oropharynx cancer.

Holly McMillan: So you can see that uptick in that line for oropharynx starting in 2010 up through two. 2030, that number continues to increase because of HPV and HPV is different. [00:51:00] And that's what I want to highlight. So if you have patients coming to you, it's important to understand their HPV status to understand potential difference in treatment outcomes, the treatment itself and overall survivor survivorship rates.

Holly McMillan: So here we can see survival curves. HPV positive are at the top. So this is a span of five years. You can see that along the bottom. And then off to the side, we see overall survival from zero to a hundred percent. Of this cohort, HPV positive has significantly better survival rates than HPV negative.

Holly McMillan: When you look at that five year mark, we're in the eighties, upper eighties there for HPV positive 90. And then HPV negative is below 50%. So there is a clear distinction between the two.

Holly McMillan: So not only with survival rates, but also anatomic site. These are just differences between HPV positive and HPV negative cancers. So anatomic site, tonsil and base of tongue are primary areas. For HPV positive. All sites are affected by [00:52:00] HPV negative age. For HPV positive, we have the younger patients.

Holly McMillan: The social, social, social economic status tends to be higher in those with HPV sexual behavior is the risk factor, whereas with HPV negative, it tends to be alcohol and tobacco. For HPV positive, we also have an increased in, in increasing incidence. So these numbers continue to go up while smoking and drinking HPV negative cases continue to go down.

[00:52:30] Staging and Spread Patterns

Holly McMillan: So head and neck cancer also has a TNM classification. So this is tumor nodal status Metastasis. Your patients will have a TNM stage. And these are, these are key to understanding, again, the type of treatment that they'll have and how we expect their outcomes to be t TX and x. And MX just means we're unable to fully assess it.

Holly McMillan: And then tumor goes from T zero to T four, it increases in size. T four is the largest, and it does mean the tumor has invaded [00:53:00] adjacent structure. So whether the bone, the nerve, the scanner, other vasculature, nodal status is really important to understand as a predictor of survival. Again, it ranges from N zero to N three.

Holly McMillan: It will tell us if it's on the, the nodes or the same side of the tumor, or opposite side of the neck, as well as the size. Metastasis is usually rare at baseline presentation. And if we do see it, it's in the lung. But we typically see M zero, no distant metastasis. So in a further away region or M1, we do see distant metastasis.

Holly McMillan: So in terms of regional metastasis for head and neck, it's somewhat predictable, which is helpful as a provider. We can use this somewhat in differential diagnosis. So when a patient comes to you let's say with oral cavity cancer, their drainage areas, their lymphatic drainage areas I should say are levels of.

Holly McMillan: One a, one, B, two and three, and it's, I've shaded it here in blue for you. So if this patient's coming in, they're worried about recurrence and we [00:54:00] see swelling in this region, that could be a good indication that we need to send them back to the primary treating team if it feels like a solid mass. If these patients come in and they have, you know, some, some generalized edema, let's say in their trapezius, so I'm a little less concerned about actual metastasis related to this oral cavity cancer, it's unlikely in that pathway.

Holly McMillan: So again, just helping to understand sort of the red flags. Oropharynx is shaded here in the green larynx. Hypopharynx is shaded here in the yellow, and then thyroid cancers here, just, we see these a lot as well. So those are lower into the base of the neck. Shaded here in the peach. Distant metastasis again.

Holly McMillan: So the spread has moved from the primary site to distant parts of the body, not just in the neck. For oral cavity, pharynx and larynx cancers, we tend to see the metastatic sites, lung, liver, and mediastinal lymph nodes that right into the chest.

[00:54:58] Treatment Overview and Evolution

Holly McMillan: So [00:55:00] oncologic head and neck cancer treatment is dependent on cell type site and stage of the disease.

Holly McMillan: So the primary site is where the cancer first develops, and it may determine how the tumor will behave. Where will it go? How will it spread? What symptoms are we likely to see? These treatments are similar to cancers for the rest of the body. Surgery, systemic and radiation, they can occur alone or in combination as definitive.

Holly McMillan: This is the primary targeted treatment for survival or adjuvant. Think of that as an additional treatment. Your patients may have adjuvant induction or neoadjuvant. So you may have, let's say, neoadjuvant chemotherapy. You're gonna have chemo before you have your primary surgery or radiation to help shrink that tumor.

Holly McMillan: Concurrent simply means we have two treatments happening at the same time, like a chemo radiation or postoperative salvage. After they've had surgery we can then offer systemic or radiation. There has been an evolution of [00:56:00] treatment in head and neck cancer. Before 1900, everyone got surgery moving into 1940.

Holly McMillan: Radiation therapy came on board into the seventies. The arrival of chemotherapy in the eighties, biologic targeted therapies, and then immunotherapy came to the scene in about 2010. So to date, curative intent, primary surgeries are radiation and primary intent treatment are surgery and radiation.

Holly McMillan: Chemotherapy in the combination is usually preserved for advanced disease. Unlike other cancer sites in the body where chemo may be primary, chemo is reserved. More advanced disease in head and neck. Primary treatment strategies, I broke this down by subsites. So for oral cavity, the primary treatment is surgery.

Holly McMillan: Radiation or chemo is adjuvant. So if you think about like if there's a weed in your garden and you pull the weed out that's surgery, you're actually physically removing the weed. And then if you go behind and sort of [00:57:00] spray with weed killer, that's the adjuvant treatment. So for this, you, you take out the tumor and then you're using radiation or chemo to make sure that there's any residual spread that that's been taken care of.

Holly McMillan: No new weeds will pop up for nasopharynx. Oropharynx, hypopharynx and larynx. The primary treatments are all radiation therapy, chemo as adjuvant for the oropharynx, hypopharynx, and larynx. If it's a very small tumor, so a T one or a T two, the surgeon may move forward with transoral robotic surgery. If it's larger for larynx and hypopharynx, we will perform something called a total laryngectomy or a total laryn pharyngectomy.

Holly McMillan: We will remove the entire site and structure.

[00:57:49] Surgery Types and Neck Dissection

Holly McMillan: So as far as surgery for the oral cavities and surgery is the primary. If the patient has a tumor of the tongue, we will see a tongue [00:58:00] resection. The tongue resection title is dependent on how much of the tongue is removed, so we have partial. Hemi subtotal and total glossectomy. Here you can see the breakdowns depending on just how much of the tongue is removed.

Holly McMillan: This patient photo here, you can see as a subtotal glossectomy, that darker pink sort of tissue here is the only native tongue they have left. The rest of it is made from a free flap from their thigh put into their mouth as a tongue floor of mouth resection and maxilla, hard palate resection here, again, dependent on how much of the tissue is removed.

Holly McMillan: So we have partial total and infrastructure maxes.

Holly McMillan: Mandible. So again, how much of the mandible has been removed? We have marginal segmental heman ectomy. So here are the breakdowns as well. The key for marginal is that the rim of the mandible is still intact. There's been a piece removed, but there's still continuity around the entire mandible. [00:59:00] Segmental ectomy.

Holly McMillan: The section has been removed and now there's a discontinuity. So there's been an actual removal. There's a break between the two bones here in these photos. I actually just used this photo on the top to show the, where the metal plate would go. So you can see it really goes from sort of the lower ear lobe al the way around, midline to chin, as well as a soft tissue flat from her thigh.

Holly McMillan: On top of it, the, the metal should never poke through, but this was just a good teaching example to show you right where the plates sort of line up. And then down and below when you see this on imaging, it sort of looks like a, a bike chain. And yes, I realize this mandible is, is broken, but we were looking for it.

Holly McMillan: But you can just see the, the nuance here in the imaging, what it looks like beneath the skin. And then for neck we have selective neck dissection where we've removed a specific group of nodes, but all major structures are preserved. Modified radical neck dissection. The nodes are removed, but at least one key structure is left behind either the spinal accessory [01:00:00] nerve, the internal jugular vein, or the sternal colleto mastoid.

Holly McMillan: Most surgeons are moving to this model trying to leave behind everything they can. And less and less we're seeing radical neck dissections, where the nodes are removed, as well as all of those critical structures on that side. And this is really important as treating therapists to understand, let's say your patient has lymphedema on the one side and they've had their internal jugular vein removed.

Holly McMillan: Well, that's important to know so that if we're moving that fluid and the main vein has been removed, where are we sending this additional fluid? How are we moving it?

[01:00:36] Radiation Basics and Side Effects

Holly McMillan: So moving into radiation, this is a picture of a linear accelerator. This is how radiation is delivered. And a zoomed in on the face.

Holly McMillan: Here you can see a mask. These patients have masks that fit like a second skin. It's so tight and it. They're essentially bolted down to a table. And that happens because these beams of radiation are sub-millimeter [01:01:00] accuracy, so there is no room for these patients to move or we could miss with the beam.

Holly McMillan: So it's very critical that they remain immobile and in place for this treatment. So external beam radiation is just focused high energy beams treating the cancer from outside the body. Typically, we see protons and photons. We often see cumulative infield toxicity. I'll talk about that a bit more on the next slide.

Holly McMillan: Usually related to the mucosal, salivary neuromuscular structures, we do see swelling and scarring. Over 50% of head and neck cancer patients will receive radiotherapy, and that schedule is usually conducted from a Monday to Friday for about six to seven weeks. As far as side effects, we do see acute and late effects.

Holly McMillan: So they may be similar, they may be different. The key here is to review the radiation plan. I'll sort of talk about that as we go through this lecture. And then the toxicity, radiation dose is field dependent. So where we see the higher doses of radiation [01:02:00] delivered, we tend to see the higher toxicity.

Holly McMillan: So this is an example. Here we see two completely different radiation fields. I, I encourage you if you can get access to these radiation fields. Typically patients have access to their own information so you can find them. But again, this is critical if you have a patient. So on the right we see bilateral field, there is radiation to both sides, pretty heavy dosing.

Holly McMillan: That treatment plan for you is the treating therapist might look different than if it's unilateral on the other side. It helps you understand which lymph nodes have been hit to a higher degree, maybe where we need to drain the fluid, where we're expecting to see the fibrosis pop up. So these are just key to helping you make your treatment plans for your patients.

Holly McMillan: So how does radiation work? Again, it uses that high energy to kill the cells. By damaging the DNA, it doesn't actually shrink the tumor right away. It kills the DNA in the tumor. The problem is it's really good at killing

[01:03:00] cancer cells and also normal cells, which is why it's it's such a skill to develop these radiation plans.

Holly McMillan: There are different pros and cons. That's a different lecture to the different beams, proton versus photon. The delivery mode is typically external beam. Again, here you can see this patient laying down in the linear accelerator with that mask on. The beams are coming from all different angles.

Holly McMillan: Less often we see internal or implant. This is brachytherapy where they actually put the radiation into the tumor. This is usually early stage oral cavity cancers. But again, we rarely see this. So as far as skin and soft tissue change, what we would expect in the acute phase for us as providers is erythema.

Holly McMillan: So redness dry to moist, declamation. The skin is fragile. There's hair loss. It can be exceptionally painful to touch. Even if they just have their shirt collar or something rubbing on it can be very painful and subacute to chronic. We can see progressive fibrosis, dermal [01:04:00] thickening, that the tissue is just not as elastic as it once was.

Holly McMillan: Tele anis fancy way for saying the blood vessels have they're superficial. We can really see them at the surface, but important for bruising. If we break them, these patients just will not heal as well. They can bruise very easily, disrupted lymph flow, dryness subcutaneous adhesions, and then layered adherence.

Holly McMillan: It's almost sometimes for these poor patients, it's as if you've taken a piece of duct tape and just sort of taped it to a piece of beef jerky. It's just, it's unforgiving.

[01:04:32] Systemic Therapies Explained

Holly McMillan: Moving into systemic drug therapies. So we, we have three types. We have induction which again is a neoadjuvant used before a primary treatment.

Holly McMillan: The goal of that is to reduce the risk of distant metastasis and reduce, reduce the volume of the tumor so that it makes the surgery or the radiation has less morbidity. Concurrent, it's a radio sensitizer. It's like shining a flashlight right on that tumor so that the radiation can do a better [01:05:00] job.

Holly McMillan: It lights it up. And then other uses, again, adjuvant salvage after the primary treatment or palliative.

Holly McMillan: So how, how, how do these systemic therapies work? There are multiple types of systemic therapy. This just means it's delivered throughout the entire body, not just targeted to the head and neck. So chemotherapy, they're cytotoxic drugs. They rapidly, they kill, rapidly dividing cells to slow the growth or kill the cancer cells, which is different from targeted therapy, which alters the inner workings of the cell.

Holly McMillan: So, targeted therapy will find these specific signals and block them, and it stops the cancer from growing. Immunotherapy uses one's own immune system to regulate and eliminate cancer. So it it, it puts you into souped up overdrive for you to find these abnormal cells and fight them. From delivery, all three can be delivered through iv chemotherapy and targeted can be delivered also through a pill.[01:06:00]

Holly McMillan: There are a ton of different types of chemotherapies and, and even more targeted immuno coming onto the scene. It's, it's a full-time job to remember them all. Most people are called medical oncologists or pharmacists. So instead of, you know, trying to remember all of them, use your resources, look them up.

[01:06:16] Chemo Targeted Immuno Timing

Holly McMillan: It can be given in different amounts of time. Chemo is typically 30 minutes to four hours given in cycles for recovery. So usually we'll see it weekly or every three weeks. Patients need those breaks in between. Targeted therapy can usually be taken continuously or daily. Again, cycle breaks as needed.

Holly McMillan: And immunotherapy is a bit shorter. It's 30 minutes to two hours given every two to six weeks. It's argued that targeted therapy is tolerated the best, followed by immunotherapy and chemotherapy. Not the same for every patient in every circumstance, but majority. And the skin and soft tissue changes that we see here are listed at the bottom, but it's really what you would expect, sort of the dryness, the thinning, bruising a lot of photosensitivity with [01:07:00] these drugs.

Holly McMillan: Swelling, neuropathy immunotherapy is interesting for the soft tissues. It's often tolerated very well, but it's when it's not it's very poorly tolerated. It, you can have immuno induced arthritis, you know, to the point where it's difficult to walk just because of the immune treatment.

Holly McMillan: So they have their, their pros and cons

Holly McMillan: for those pros and cons.

[01:07:25] Key Clinical Resources

Holly McMillan: I've listed here some key resources that I use. This is the NCCN guidelines as well as the seer. Training models, and I like these because they stay relevant and they stay up to date. So you can simply go into these resources, look up your cancer by type, you click head and neck, and then it will go through what are the actual guidelines for treatment and what are the typical treatments for these cell types and tumor locations.

Holly McMillan: So I find these very helpful.

[01:07:52] Lymphedema Basics and Drainage

Holly McMillan: Okay, so moving into side effects or the treatment toxicities. I will not spend a lot of time on [01:08:00] lymphedema. We're gonna have an excellent talk about lymphedema. But I'm just gonna go through some of the most common toxicities that we see very briefly. Lymphedema is localized treatment related damage to the lymphatic network.

Holly McMillan: It's, it's different than trauma based edema. This is a physiologic failure of the lymphatic system. We have difficulty filtering out and transporting that lymphatic fluid throughout the body. It, it's simply just when lymphatic load that fluid exceeds the transport capacity and it looks like swelling.

Holly McMillan: These are two articles that I like to share as references that do a really nice job of measuring patient reported outcomes and the soft tissue complications related to lymphedema. And here in Houston we have Buffalo Bayou. We have bayou here. It's kind of like a river. When they behave, they look like this just to the right of the city.

Holly McMillan: It looks very peaceful. The fluid is flowing in one direction. We have a disruption, something like Hurricane Harvey come through. And then there's no direction. Everything's diffused. It's spilling out from its boundaries. And this is sort of [01:09:00] what I, I use to reference for patients when we're talking about lymphedema.

Holly McMillan: The walls have broken down and we need to manage that fluid and get it streamlined again.

Holly McMillan: Again, radiation treatment plan is exceptionally helpful for you as the treating therapist to understand how we can mobilize fluid like lymphedema. So on the radiation plan to the left bilateral, this is typically what we see. Both sides are treated with radiation therapy, so that may help you Understanding the right side may be worse, but it may be more clogged and difficult to move that fluid through because it had a higher dose of radiation.

Holly McMillan: The patient on the right had a narrow field larynx radiation. So we have both sides of the neck fairly wide open. So we can take whichever side will drain. So in what you see in, in your treatment, so. We can treat these two cases very differently with different access patterns. This is a one of my patients here.

Holly McMillan: This is a typical situation for what we see for head and neck lymphedema. We see it, you know, sort of along the right side of his face and all throughout the neck and [01:10:00] that flap. So lymphedema at the bottom here sort of summed it up for you. Typically caused by tumor radiation or surgery. The consideration and risk for us is edema exacerbation.

Holly McMillan: So if we're creating a lot of friction and deep work, we're gonna cause inflammation. Consider that when you're trying to drain lymphedema and consider the drainage pathway. So skincare exceptionally important here to keep that skin protected from further breakdown and infection. Helping you for your treatment plan for manual lymphatic drainage and any other anti-inflammatory techniques are quite helpful for this group.

[01:10:37] Radiation Fibrosis Management

Holly McMillan: Radiation fibrosis. We see this quite often, unfortunately. Radiation fibrosis is a chronic progressive sclerotic tissue change. This will likely harden over time and unfortunately it reduces oxygenation, blood and lymph flow. It can limit muscle contraction, nerve impulse sort of everything just gets very stiff.

Holly McMillan: [01:11:00] There are different stages for radiation fibrosis. It can begin minutes after the treatment's delivered, and sometimes we don't see these conditions pop up for years after radiotherapy. It doesn't mean because they don't have it in an acute setting that they will not have these changes later on in life.

Holly McMillan: This is a, a healthy persimmon. It's nice and juicy. And when you put it through the dehydrator, that's what happens and that's sort of what happens to the soft tissue. Everything just curls up, gets very dehydrated and stiff. Then we have radiation fibrosis syndrome. This is the actual syndrome associated with the radiation fibrosis.

Holly McMillan: Dr. Michael Stubblefield does a wonderful job describing this. He has a ton of work out there in this field. Highly recommend these reads. He does a nice job of breaking down the differences in the syndrome from radiation fibrosis. And what we can do about it is treating therapists. So radiation fibrosis syndrome caused by radiation.

Holly McMillan: Our considerations are tissue tearing. If this tissue breaks down, it is exceptionally harder to heal. These patients may have [01:12:00] reduced sensation to heat and ice, so we need to consider thermal therapy use. And the modification is really to reduce aggressive and rapid techniques that are going to cause inflammation, particularly when these patients are going through the more acute phase.

Holly McMillan: And these fibroblasts just continue to lay down very rapidly. We find over and over in clinic that this tissue actually has a very favorable response to a low load, long duration or sustained technique. Not so much the aggressive, quick, short manipulations to the tissue, but, but a slow, elongated movement.

[01:12:38] Vascular Risks and Safety

Holly McMillan: There are a number of vascular changes that come from head and neck cancer treatment long-term cardiovascular risk, particularly carotid artery stenosis and barrow reflex failure. We see about 20% of patients in head and neck survivorship develop radiation induced stenosis within three years.

Holly McMillan: And why do we care about that? Well, the risk of stroke. So again, [01:13:00] if we're manipulating that lateral neck, anywhere in the carotid region, you need to be aware of this. Again, patients typically have ultrasounds

or they're following up with a cardiologist, so it's important to understand that information and what those tests are telling us.

Holly McMillan: You may see that these patients have severe blood pressure instability recurrent syncope. We feel like they're very under-recognized and under-diagnosed. These patients have a ton of toxicities and sometimes this one gets overlooked, but it matters for us as therapists because when they're laying down on a table for too long and they go to stand up, we can have a real issue.

Holly McMillan: I find that a lot of my patients, just whether they have a feeding tube in the stomach, they have a trach tube in the neck or just pressure down in the face cradle for too long they don't tolerate that very well. So I actually do a lot of sideline work for this group. And this is not for us to go through, but for all of you to have as a reference in sort of the vascular characteristics, manifestations surveillance, what we do about it from a medical [01:14:00] standpoint.

Holly McMillan: So at the bottom vascular injury can be caused by surgery and radiation. Again, we're looking for that risk of stroke. Any sort of vasovagal event. Syncope, lightheadedness. I typically seek clearance from cardiology. Take a look at that ultrasound report. It's clear as day in the impression of what's going on, avoiding the carotid region especially in rapid change positions.

[01:14:24] Skin Mucosa and ORN

Holly McMillan: So these there are some graphic photos about to come onto the screen. So for skin and mucosa changes we see them and we see them often. These can be caused by radiation, systemic therapies and surgery. Our risk is really, we see a lot of infection, pain, and tissue tearing. Again, this tissue may not heal the way that it once did.

Holly McMillan: Topical relief, barrier protection, very important for this group as approved by the medical team. And it, it's not that you can't work with these patients, you absolutely can, but it's treating them in the toxicity free zones. And while, you [01:15:00] know, these two pictures I just put on the screen may look less bothersome than sort of these larger wounds, they can still be very painful and very problematic.

Holly McMillan: So it's our job as the, the treating providers to sort of avoid these areas and monitor encouraging those patients to go back to the medical team if they need to. Osteonecrosis. ORN is what it's referred to. Again, I keep

adding some articles onto the screen that are just great references and resources for these topics.

Holly McMillan: So, ORN is non-healing exposed bone. Usually we see it in the mandible, sometimes in the maxilla, but it can happen in, in any bone. That's been previously radiated. It's, it can be exposed, it doesn't have to be. So sometimes we can see it clinically, like in this photo. Sometimes the mucosa is healed over it.

Holly McMillan: We cannot see it by looking in the mouth and we see it only on imaging. It can present with pain, swelling, reduced mouth opening or trismus infection, draw jaw fractures. The scary part is sometimes they are completely [01:16:00] asymptomatic. That patient does not know. That they have osteo necrosis, but they're at great risk for fracture.

Holly McMillan: So the treatment for ORN is managed. It's managed by the medical team, antibiotics, oral rinses, hyperbaric oxygen, small surgical removals, or larger reconstructions. So again, caused by radiation. Our risk is we are worried about fracture pain in non-healing regions. Gentle blood flow promoting techniques are wonderful for this group.

Holly McMillan: The bone is dying, so increasing that blood flow to a previously avascular space is thought to be very helpful. But we avoid direct contact right over it again because of that risk of fracture.

[01:16:43] Trismus and Neuropathy Care

Holly McMillan: And then Christmas, this is one of my love languages here. So this is reduction in mouth opening, usually around 35 millimeters or so, or just patient reported.

Holly McMillan: Three finger widths is normal, so stick in those fingers between your teeth, like that top photo. [01:17:00] Christmas is a lecture in, into its own. But there are different pathophysiologies and the things that I love about our group here and listening to this lecture. We're all aware of pathophysiology.

Holly McMillan: We have to treat the reason why something is happening, you're not treating the mouth opening reduction, you're treating the scarring inflammation. Nerve damage is a real consideration. If there's a mechanical blockage, there's nothing we can do about that as, as our field, but we can send

them back to the medical team for management to remove that tumor or if the reconstruction's in the wrong place, whatever it is.

Holly McMillan: So Christmas can be caused by tumor, radiation, surgery, or systemic therapies. Considerations are definitely muscle injury. Fracture. The mucosa is exceptionally fragile. And, determining the etiology. Why are they having difficulty opening their mouth before we treat them? We adjust the treatment plan based again on that mechanism of action.

Holly McMillan: Why can't they open their mouth? Sometimes we need to decrease pressure more than we think because inflammation and pain in this in this cohort only [01:18:00] actually make the mouth opening worse.

Holly McMillan: And neuropathy so long lasting often irreversible damage to the cranial nerves. So we can see this in weakness, change in sensation it can affect a lot of different senses. So hearing, swallowing, voice their speech, their smell, just their overall range of motion. So neuropathy can be a big problem for patients with head and neck cancer.

Holly McMillan: Here you can see the tongue. Here again, I don't know if you can see my mouse, but you can see the asymmetry in the two different sides of the tongue. This patient has a left-sided hypoglossal neuropathy. The patient in the lower photo has weakness in the lips on the right, and then the patient in the upper right portion has bilateral hypoglossal neuropathy.

Holly McMillan: That tongue has very low tone and it deviates to the patient's left. So neuropathy can be caused again by all of the treatment options as well as tumor. The consideration here is worsening the atrophy. If [01:19:00] we elongate a muscle that is already low tone, we could further reduce the sensation or worsen the atrophy.

Holly McMillan: So we're avoiding massage and stretching of at atrophied tissue, decreasing pressure and be aware if you're using any temperatures, they may not be able to feel them.

[01:19:18] Toxicity Timeline and Red Flags

Holly McMillan: So timing of toxicities. Very important. So we have immediate, which is like the first 72 hours. We usually here see inflammatory protective edema, clotting, scabbing. We move into the acute phase of these side effects from three to 90 days. Again, we still see an inflammatory component, but these can be more transient and reversible.

Holly McMillan: Chronic is more than 90 days, more than three months to five years. This is when we start to see the vascular changes. Irreversible damage in fibrotic tissue very late is greater than five years. So again, these patients can absolutely have new side effects pop up after five years of head and neck cancer treatment.

Holly McMillan: These can be [01:20:00] progressive, late onset and long term. They're usually accompanied by fibrosis or neuropathy, and they're presenting as a functional decline.

Holly McMillan: We won't go into all of this again, but this is just for reference and resource. This is wonderful work put out by Juan and Stubblefield in 2025. Just looking at prevalence of function, limiting late effects in survivors with head and neck cancer. So if you specialize in any of these regions, this may help you understand just the prevalence rate and how common it is.

Holly McMillan: Contraindications for site-specific work in manual therapies for head and neck cancer, anywhere that there is uncontrolled pain dislocation, these, these should all seem familiar to everyone on the call. Mechanical barrier risk for fracture, dermal metastasis, you can see in the lip here in this photo that's cancer breaking through the skin infection, fistula.

Holly McMillan: We can't always see the fistula clinically, so again, it's important to get the reports through the ct [01:21:00] to see if there are any fistulas. We can absolutely stretch those open, make them worse. Wounds. Wounds are not always a contraindication. Again, that's a different topic. But when there's infection related into the wound, local site, specific treatment is avoided muscle atrophy and recent surgery dictated by when the surgeon will allow us to begin work, uncontrolled carotid disease.

Holly McMillan: Platelets, when there are less than 50,000, we are avoiding other medical procedures at 50,000. So, we follow that guideline. Unstable airway if we have a fever pneumonia, active pneumonitis, and then subcutaneous emphysema or that sort of crepitus feeling.

[01:21:39] Comfort Touch and Palliative Care

Holly McMillan: So I won't go into this too much, but it's important to mention as well end of life and comfort touch.

Holly McMillan: We use this in head and neck cancer just as we do in all cancers. And it's very similar practice. The goal is to reduce perceived pain, anxiety, and stress. We want to enhance dignity and just offer our presence. I don't know how many of you on the call are, have ever done hospice or palliative work, [01:22:00] but this is absolutely powerful.

Holly McMillan: Work for head and neck and, and all cancer patients. We use gentle touch. We avoid deep pressure near the airway and sensitive tissues. And for a lot of our patients, that's the anterior and lateral neck it can give a, a choking, sensa choking sensation, even just with the pressure of our hands. So we avoid those areas.

Holly McMillan: Facial if tolerated just very light, short strokes. Patients don't always like the face. Manipulate as well. I love teaching handholding and hold techniques to families just to give them that closeness especially at the end of life. This is a fabulous article that just came out in 2025, just looking at the effectiveness of different therapies in palliative and end of life situations.

Holly McMillan: A great review.

[01:22:44] Research Evidence and Wrap Up

Holly McMillan: Okay, and then moving into research, as we wrap up this talk, I wanna highlight a couple of pieces of work that we've put out recently. So we get questioned a lot. Does manual therapy actually help, particularly in Christmas? So reduced mouth opening in [01:23:00] head and neck cancer. And we published this article in 2022 where we found actually a great effect of manual therapy.

Holly McMillan: So in this cohort that we studied a 49 patients, all patients had radiotherapy. Almost half of them had oropharyngeal head and neck cancers. What's interesting about this group is almost half of them are five years or greater into their survivorship. So this isn't a new transient mouth opening issue isn't edema based.

Holly McMillan: And a lot of them had moderate to severe ness. So again, pretty bad mouth opening in, in a pretty late or long-term survivor. What we found was that after a single session. We had a moderate effect size, so the treatment gave us about four millimeters, which is pretty, pretty great. These patients are, are grateful for every millimeter it counts.

Holly McMillan: And then at large effect size after serial visits, which on average was about three, and it gave us over six millimeters of change for their mouth opening. What you'll see in the bottom, this is just a waterfall plot. The dark blue line indicates increase in millimeters [01:24:00] after a single session. And the teal, the lighter blue line, indicates after serial sessions the, again, the increase in oral opening.

Holly McMillan: What you'll see at the very far right are there three that actually got worse. And we found out later that all three of those patients actually had recurrent disease. And unfortunately mouth open is one, sometimes the first indicator that we need to rescreen for recurrent disease. So this is also the mantle trial.

Holly McMillan: This is manual therapy for fibrosis related late effect dysphagia, so swallowing difficulty in head and neck cancer survivors. And in this cohort, we looked for patients that were at least two years out from their treatment with radiation related fibrosis and at least a grade two or a moderate swallowing difficulty.

Holly McMillan: We offered these patients 10 manual therapy sessions spread out over six weeks. We titrated down as the time went on, and then the patients had a washout period. They had six weeks of just at home practice and we, [01:25:00] we evaluated them at three different time points. This, I won't go through all of this with you again.

Holly McMillan: This is just for your resource, but we did publish the actual protocol that we used. So we described the functional goals. We went from extension to then rotation, lateral flexion and then swallow specific muscles and then region of interest. And then the actual techniques that we used, we broke them all down.

Holly McMillan: If you're interested, again, in the final results publication, it's there. We had 24 participants in this study. Again, all patients had radiation therapy. About two thirds of them had oropharyngeal tumors. This group the median time post-treatment was almost nine years after radiotherapy again.

Holly McMillan: So these are the sort of our late effects patients coming through. 80% of them, we were looking for at least a moderate decline in swallow, but almost 80% of them had a severe dysphagia or difficulty with swallowing. Almost 90% had suspected lower cranial [01:26:00] neuropathy, so multiple or just one of the cranial nerves demonstrating neuropathy.

Holly McMillan: And a third of them had a history of mandibular osteonecrosis. So again, sometimes these patients can seem to be the ones that we sort of, stay back from or, or nervous with, but this was the cohort we were actually targeting. We wanted to understand. Safety and feasibility. That was our primary goal for this work.

Holly McMillan: And what we found that manual therapy was both safe and feasible in this cohort. Patients feasibility was measured by completion of the program. We had a 92% completion rate. Patients show up for massage. They like it. And then safety. We, we had one patient, and I want to just be fully transparent. We had this patient, or the, the safety event evaluated by the Safety Monitoring Review Board, so an independent review board.

Holly McMillan: They felt like the event was unlikely related to manual therapy, but we did have one participant with a grade three severe adverse event where he had some [01:27:00] difficulty breathing and we sent him to the emergency room prior to even starting manual therapy, that session. So we heard him in the lobby and we, we sent him for additional care.

Holly McMillan: So again, both, both aims were met. So in the final results we saw significant improvement in range of motion of the neck, the jaw, and the tongue, which was very exciting. Pretty great change in symptoms and quality of life in these measurement tools listed below what did not improve after manual therapy.

Holly McMillan: And what's interesting is it, it didn't worsen or improve, they just sort of stayed the same. But again, this was only six weeks of manual therapy, but the swallow metrics did not change. So the grading of the swallowing, which anecdotally makes sense, we targeted the swallowing muscles less 'cause we worked on extension and range of motion first.

Holly McMillan: And then some of their diet scores here I always like to point out as well. In our world, we're very [01:28:00] concerned with functional outcomes, getting these patients back to, to functional domains. But one of the things that I also love to highlight, and particularly to a group like this yes, we had physical improvement.

Holly McMillan: Patients are functioning better. This is great, but also their emotional scores were reported to go up. And what's interesting is they went up during the segment of manual therapy and hands on, and then we lost that gain in their six weeks washout when we were hands off. So showing that there is an

emotional score change when we actually connect with these patients with manual therapy, that just warmed my heart as a, as a manual therapist.

Holly McMillan: So to wrap up manual therapy is a useful tool for patients with head and neck cancer. Risks do exist. This territory is, is risky. It can be challenging, but with modifications, we can absolutely reduce them. The medical team, when it comes to clearance, [01:29:00] when you have doubt ask these providers are more approachable than one might think they want the best for their patients.

Holly McMillan: So we as manual therapy estheticians, deserve a seat at that table because we can improve those patients, whether it's quality of life or functional impact. When you ask questions, that builds a better trusting relationship and they will absolutely hear your concerns. So reach out to those medical teams for clearance.

Holly McMillan: Knowledge is key. So seeking those radiation plans, understanding this area was more heavily radiated. Maybe we divert the fluid, maybe we work on fibrosis in this region instead. Imaging results, knowing your patient literally inside and out. And then operative notes. Those are just really helpful tools that we should have access to so that we can do a better job in treatment planning for our patients when they come to see us.

Holly McMillan: So, thank you for your time and attention today. I'm very much looking [01:30:00] forward to the panel and I did want to share. I did make some quick guides, so I sort of summarized everything that I said. When going through the morbidities, this will be for your reference if you would like. And then I also put together a timing of massage and aesthetic safety for head and neck cancer.

Holly McMillan: So when to defer, proceed with caution and used the modifications broken down by time post treatment. So I thought these might be helpful for resources. So thank you again.

[01:30:31] Head and Neck Cancer - Impact of Treatments on the Lymphatic System with Nicola McGill

[01:30:31] Welcome and Goals

Nicola: Hi, good afternoon to everybody and welcome to my little introduction into how the lymphatic system is impacted by head and neck cancer and head and neck cancer treatments. My name is Nicola McGill. Some of you may be familiar with me from classes that you may have taken with me teaching about the lymphatic system, but I'm here today really to inform and.

Nicola: Educate people on the impact that head and neck cancer can have on the lymphatic system in [01:31:00] general ranging from treatments for head and neck cancer, as well as the cancer in itself. And I hope to be able to kind of support you in ways that as a massage therapist, if you haven't had any training as a manual lymphatic drainage therapist, ways in which you can support this cancer population.

Nicola: But if you have had manual lymphatic drainage training through many of the schools throughout the United States or internationally, then how you can use and optimize your manual lymphatic drainage skills in order to help this client population. I'd like to thank the Society for Oncology massage for inviting me, and I know there are a couple of other presentations that are relating to the lymphatic system and head and neck cancer and I hope that between all of us, we can all collaborate and bring you as much information as possible to support you with these patients.

Nicola: So I'm going to start the presentation. I know at the end there will be some questions and answers and I [01:32:00] am more than happy to answer those at the end of the presentation.

[01:32:03] Lymphatic System Basics

Nicola: So, I'm going to start off by talking a little bit about the lymphatic system. What the lymphatic system is, the go over the anatomy and physiology as. Mentioned before. Some of you probably already know some of this information, but I want to just really reiterate information and update everybody and remind ourselves what the role of the lymphatic system is.

Nicola: The lymphatic system is a vital system in the human body. It gets a lot of a lack of recognition, should I say. But it is closely connected to our cardiovascular system, and it is very important in the maintenance and homeostasis of tissue fluid, which is the fluid that appears in our tissue spaces.

Nicola: And this fluid gets into our tissue spaces as a result of the function of the cardiovascular system. So three key roles to the lymphatic system, but what's [01:33:00] more important for US and our role is obviously the fluid

balance and the fluid maintenance of the tissues. Brief overview of, the lymphatic system, we have numerous lymphatic organs and these lymphatic organs are really essential in immune function and immune response.

Nicola: And then we have this network, this plexus of vessels that carry lymphatic fluid that appears in our tissue spaces or our interstitial space, or depending on what literature you may come across. It's also known as the extracellular matrix, the extracellular space. So these vessels, which are often illustrated as green vessels in in textbooks,

Nicola: these vessels collect that lymphatic fluid and take the fluid into groups of lymph nodes. And then these lymph nodes will filter the fluid and eventually bring the fluid back into our main veins at the neck area. And we turn that fluid back to our cardiovascular [01:34:00] system. And these are just some simple diagrams that are showing you, you know, your lymphatic vessels.

Nicola: In the connection to our venous system, we've got two major junctions of veins in the neck area. Again, we is gonna be very important to understand when we talk about our head and neck cancer patients. And we've also got these little kind of structures that actually collect and absorb that lymphatic fluid to take it back to our main lymphatic drainage vessels.

Nicola: This illustration here is just a very brief and a fairly old illustration, but I like the illustration because it really does show you from the side of the face the location of some of our major lymphatic nodes in the head and neck region located alongside the SCM muscle, the trapezius muscle, as well as some of these smaller lymph nodes that are located on the face of a facial drainage.

Nicola: Again, important to look at these, which we will look at these in in greater detail. As we start talking about the head and neck [01:35:00] cancer patient, a little more so the functions of the lymphatic system, like I previously mentioned, but very briefly, it prevents the formation of edema and it returns that interstitial fluid from the interstitial and it returns it back to your cardiovascular system.

Nicola: It plays a key function in the absorption of your fats and your fat soluble vitamins from your intestinal lymph vessels. So it plays a key role in digestion and really, really important is the, the fact that it can provide immune surveillance. Recognizing your cancer cells, your viruses, your foreign cells, all these different things.

Nicola: And I think it's important to also recognize that with head and neck cancer patients, any disruption to their lymphatic system, they're gonna obviously have to experience this formation of edema, lymphedema, because the lymphatic system is unable to return that fluid back. But at the same time, it will impact the immune the immune system to a certain extent.

Nicola: So that can also [01:36:00] increase the risk of a, a compromised immune system, as well as leading to, you know, complications from infections, et cetera, from the damage to the lymphatic system.

[01:36:10] Lymph Fluid and Flow

Nicola: Lymphatic fluid, well, what is it? It's basically a fluid that consists, consists of protein, water, fats, and cells. These are the components that end up in your interstitial space.

Nicola: And as a result of your blood circulating around the body. So nutrients and water leave your blood capillaries to nourish your tissues and cells that then ends up in the interstitial space and your cells can pick up that fluid as pick up the fluid and the nutrients as they need it and what's not required.

Nicola: Stays in the interstitial space, and it's the lymphatic system that is responsible for absorbing that waste material and returning it back to our cardiovascular system through these lymphatic vessels. So lymphatic fluid is actually very, very important. It's vital to get that fluid and those proteins out of the tissue spaces [01:37:00] and return that fluid back to your cardiovascular system, basically recycling.

Nicola: And we'll talk about, you know, the role of a lymph node in filtering that fluid to ensure that the proteins and the water that gets back to our cardiovascular system is clean and filtered. So your lymph fluid again, is produced in small lymph capillaries as a result of that filtration of water, like I mentioned.

Nicola: And then once that lymph capillary is filled, it's then transported to a larger lymph vessel called a collector. The collector is where you start to get direction of your lymphatic fluid. Then towards the lymph nodes lymph nodes will filter this fluid, and then eventually that fluid is kind of concentrated because a lymph node will absorb some of the water.

Nicola: It will concentrate that fluid down. So there's a higher protein content that will then go into larger lymphatic vessels known as lymphatic trunks, and

eventually that will lead back, like I mentioned in that diagram before, back to what we [01:38:00] call larger lymphatic trunks and into our lymphatic duct or our thoracic duct in order to get back to our cardiovascular system.

Nicola: So this fluid is vital, and when there is a disruption to the lymphatic system like a mechanical disruption, IE, these lymphatic vessels cannot function correctly because of damage, as is often in the case with our head and neck cancer patients. Then lymph stasis, lymph stagnation occurs in the tissue spaces, and that can then lead to fibrosis, leading to further complications, leading to risk of infections, as well as fibrotic tissue formation, scar tissue in interruptions, et cetera, et cetera, which is what our head and neck cancer patient often experience.

Nicola: This I'm playing this little video courtesy of close training here, but you can see how the movement of lympho occurs through these little lymphangion. Lymphangion is the single functioning unit of one of our lymph collectors that fills up [01:39:00] and basically contracts to the next lymphangion, then to the next lymphangion in order to propel that fluid from the tissue spaces into our lymph nodes.

[01:39:11] Lymph Nodes and Immunity

Nicola: So lymph nodes, again, these are very important lymphatic structures. They play a role in immune function as well as in the regulation of our tissue fluid. So they serve as the filtering stations for our lymphatic fluid. They regulate the concentration of protein by absorbing water from this lymphatic fluid so that, that when the the fluid gets into our cardiovascular system, me, it has less water.

Nicola: And you can see from this illustration that we have. A, a vast number of lymphatic vessels, bringing that fluid from the tissue spaces into our lymph node, and then the lymph node here, large surface area that will kind of change and filter out all this fluid and then less vessels leaving. Therefore, you know, you've got more concentration of [01:40:00] fluid within this lymph node.

Nicola: We are seeing a lot more research and I've been like noticing a lot more research as, as to the role of the lymph node. And it really is vital to the immune response because within this lymph node we have the storage and production of lymphocytes. We have macrophages, dendritic cells that are carrying antigens, broma tissue spaces to the lymph node in preparation for antibody production.

Nicola: So there's a, you know, a very vast role that this lymph node has in monitoring that it's environment and. The, the tissue space and also your immune function when lymph nodes are removed. As many of you are aware, in the cancer patient lymph node dissection lymph node biopsies occur and this disrupts the filtration of our lymphatic fluid.

Nicola: When they are removed or even received radiation from for cancer treatment, [01:41:00] these lymph nodes no longer function. So not only have we lost the ability to filter the fluid, but we've also lost a localized immune response, which is why people often develop there are high risk of developing skin infections.

Nicola: And we will get into that in a little bit more detail. And we have approximately 600 to 700 lymph nodes in the body, but at least a minimum of 300 of these are found in the head and neck region. So you, I'm sure you can appreciate when you have a head and neck cancer patient. Because of the, the density in the location of these lymph nodes, many of them are impacted and often removed or radiated.

Nicola: So that really does reduce fluid drainage as well as compromising the immune response in the area.

[01:41:48] Neck Drainage Pathways

Nicola: Deep lymphatic drainage is when, me, when we are talking about, once that fluid has been picked up from your lymph capillaries in the tissue spaces goes into the larger lymph collectors and [01:42:00] then into your lymph nodes, eventually that fluid has to come back into.

Nicola: Our cardiovascular system, and that happens by entering either into the right or the left side of the neck. On the right side of the neck here, we have the right internal jugular vein, right subclavian vein, and this is where our right lymphatic duct drains in. And you can see here that there is a quarter of the body that is drained by the right lymphatic duct, and we have the remainder three quarters by the thoracic duct.

Nicola: But here you can see the right side of the head and neck region is gonna drain into the right lymphatic duct here and enter, enter into this junction of the two veins, so right head and neck drainage if that is compromised. Even, you know, in the area of these two veins cervical lymph nodes can be found and if they are removed or damaged from a, with a head and neck cancer patient, that's gonna infect the right side drainage particularly.

Nicola: And then the same applies [01:43:00] to the left side of the head and neck, where we've got these the thoracic duct as well as left internal jugular vein and the left subclavian vein at that junction. This is another location where we can find many lymph nodes. So with a head and neck cancer patient, if any of these lymph nodes are need to be removed with surgery or radiation because of cancer cells that are present, then all of the main drainage can also be impacted, not just localized drainage where the, the cancer or the tumor has been located.

[01:43:34] Watersheds and Head Neck Swelling

Nicola: I want to talk briefly about our watersheds because this is another important thing to consider when we are talking about a head and neck cancer patient and why sometimes, well, more often than not, as we'll discuss lymphedema occurs in this area of the head and the neck, and it doesn't go to other parts of the body.

Nicola: Those of you that have studied the lymphatic system and understand manual [01:44:00] lymphatic drainage, you'll recognize these watersheds, but basically this watershed here known as your clavicular watershed, and then posteriorly, we have the spine of the scapula watershed. These two watersheds prevent any fluid in the head and neck region crossing over and going down into other parts of the body.

Nicola: So when we have got damage to the lymphatic system in this region, the fluid will build up in the tissues, as you know, the same as what can happen with lymph nodes that are affected in the illa or the inguinal region, there is nowhere for this fluid to go. And so this is why it does build up in the region and people develop head and neck lymphedema.

Nicola: Most of us think about lymphedema as being like visible and we can see it and palpate it. But with a head and neck cancer patient, a lot of this lymphedema is internal. And again, we'll talk about that in a few more slides later. But it's, I just want everybody to recognize that [01:45:00] we do have these watersheds that prevent that movement of fluid going into other parts of the body, which is why we see that buildup of fluid above those two watersheds in the head and neck region.

[01:45:11] Head and Neck Lymph Anatomy

Nicola: So I'm gonna show you a little bit more going in a little bit more detail into the lymphatic vessels of the head and neck. These, again, are often impacted as a result of head and neck cancer treatments. So we have lymphatic vessels that are divided into either their superficial or they run deep, your superficial lymph vessels, and you can see all these different colors that have been put in here.

Nicola: We've got the posterior aspect of the head. These are lymphatic vessels that drain into the occipital occipital lymph nodes, the occiput region. And we have more of the lateral aspect of the forehead going into these lymph nodes that are behind the ear. We've got some more at the frontal lobe area going into the preauricular.

Nicola: Lymph nodes at the front of the ear, and we've got these ones that drain [01:46:00] from the eyes and the cheeks down into your submental and your submandibular regions here. This is what we call our superficial drainage. Now these all drain into eventually some deeper lymph nodes, which can be seen from this illustration.

Nicola: And you can see this is a chain of lymph nodes. They're all linked. We have a lymph node, then a lymph vessel, a lymph node, then a lymph vessel. So there's this constant drainage into not just one, but numerous lymph nodes. So your deep lymphatic vessels there at the deep cervical lymph nodes located here, and these drain directly into your thoracic duct and your right lymphatic duct.

Nicola: Obviously this, this illustration is only showing the right side, but obviously it's gonna be the left side too. But you can see how these vessels that come from these deeper lymph, no. All gonna drain into this angle here we call the supraclavicular fossa angle, where your thoracic and your right lymphatic [01:47:00] duct reside.

Nicola: Looking a little bit more closely in the lymph nodes of the cervical region, again, we have groups of lymph nodes preauricular in front of the ear, retro auricular or posterior auricular behind the ear. Occipital lymph nodes and then along these major muscles. Now this is definitely something that needs to be taken into consideration with our head and neck cancer patients because if there are cancer cells or the, the tumor is closely located in these areas and they have to remove radiate or reconstruction, even surgical reconstruction, then the muscle is hugely impacted, which obviously can then lead to range of motion issues, support issues cosmetics issues, et cetera.

Nicola: So this is again, something that we can possibly help with with our head and neck cancer patient. We've got our supraclavicular lymph node here, we've got our submental [01:48:00] and submandibular lymph nodes. So again, as. If you look back into the pictures that the illustrations from the previous slide, you can see where all the lymphatic vessels run into these groups of lymph nodes.

Nicola: So your as I mentioned, 300 lymph nodes are in the head and neck region. The superficial lymph nodes extend from under the chin to the posterior head. They receive the lymph from the scalp, the face and the neck eventually draining into the deeper lymph nodes. Gravity supports sufficient drainage here, which is very, very helpful.

Nicola: So obviously when. We have got somebody that has a disrupted lymphatic system from a head and neck cancer treatment. You know, gravity is going to be kind of helpful to some extent, but sometimes we have to adjust our positioning because we want to try and avoid that buildup of fluid in a compromised area.

Nicola: Deep lymph nodes, they lie vertically in a long chain along the internal jugular vein, which we saw from the previous slide. And they receive lymph from the head and [01:49:00] neck directly or via the superficial lymph nodes. So that, hopefully that gave you a bit of an insight into in a brief introduction, insight into the structure of the lymphatic system and particularly the head and neck region.

Nicola: And hopefully you can already appreciate that with such a vast amount of lymphatic structures, the lymph nodes and the lymph vessels in the head and neck region when there is a diagnosis of head and neck cancer. The treatment is gonna be fairly drastic, and that is really going to impact lymphatic function in a huge way.

[01:49:36] Cancer Overview and Risk Factors

Nicola: And I think when we look at these figures in the prevalence of head and neck cancers particularly here in the USA, you know, these are large numbers. And you know, 95% of these cancers that are diagnosed are squamous cell carcinomas, which impact your mucosal linings. And we have a lot of that going on, obviously in the head and neck area.[01:50:00]

Nicola: The HPV virus there's a steady increase in head and neck cancers related to the HPV virus. The figures are in increasing, and, you know, the, the patients that we see here tend to be younger. They're more responsive to treatments, but obviously they're, you know, the impact on, on anybody that's had head and neck cancer is going to be huge.

Nicola: But for younger people, there's a lot more complications that can come from that, they're looking for patients that tend to be younger and more responsive to treatments, but younger patients tend to have, their work environment, their home environments, and the, the way that they interact with their peers and within their workspace. And just overall, these people need to be probably treated more aggressively just because they're gonna need more ability to, for better function. So risk factors for head and neck cancers. Most people associate head and neck cancer with the [01:51:00] use of tobacco products and alcohol. But there are numerous other risk factors too, relating from, you know, different products to chemicals and others such as viruses.

Nicola: The viruses have been indicated in many, in the formation of many different types of cancers. So we know that human papillo virus has been one reason for the increase in head and neck cancers for sure. But the Epstein Barr virus is also indicated in that plum Vincent is a condition where this, there's this kind of webbing that occurs in the esophagal region and it's also related to anemia.

Nicola: I'm not fully, clued up on the entire condition and the risk factors for that. But I know people with a history of plumber vision, they are a higher risk for a head and neck cancer diagnosis.

[01:51:50] Treatment Options and Reconstruction

Nicola: Now, the treatments for head and neck cancers range from surgery, chemotherapy, radiation it just obviously de depends on the pathology of the cancer in itself.

Nicola: [01:52:00] Its location, it's a more complicated scenario that has to be. Approached with, you know, numerous types of treatments. And the goal, obviously is to get a complete pathological response. I have witnessed several patients over the years that have had reconstructive surgery that, so that impacts not only the area for that reconstruction, but it also Im impacts area where they've had tissue transplant.

Nicola: So I had a patient some years ago who had tongue cancer and they had to remove the tongue, but they reconstructed a new tongue by taking tissue from the inside of the forearm and the thigh. So he has other issues to address, not just from the area where he's had the reconstruction. So we are looking at, you know, the, the surgeries, the chemotherapy and immunotherapies.

Nicola: Again, that can be, you know, a short term. [01:53:00] Chemotherapy can be short term or they're on immunotherapy for a long term. And all of these, these agents in particular can impact the healing and recovery of the, the head and neck cancer patient as well. And then obviously radiation, which we're going to look into in more detail, radiation impacts the lymphatic system slightly more than what your chemotherapy and immunotherapy will.

Nicola: And obviously surgery is directly going to impact it, but radiation, it's the, the damage to the surrounding tissue. And you know, that really has, you know, been studied more about the damage to the lymphatic system, as we will see in the upcoming slides. So surgery for head and neck cancers. And as you can see from this photo, we've got some reconstruction here, but we've lost a lot of tissue.

Nicola: Muscle is damaged. We've got, changes in posture, this can happen. So there's so many things [01:54:00] that the surgery in itself can create. It can be a radical, a modified or a selective neck dissection. It can also involve lymph node removal. The reconstructive surgery, sometimes the free flap is performed.

Nicola: So we have vascularized tissue transferred from distant donor site, like I mentioned, the forearm and the thigh. My patient that had the a tongue reconstruction. And then there's a pedicle flap where your pectoral is major. Muscle is tunneled into the neck area with vasculature, so no microsurgery is needed, but it does remodel the anatomy of the neck.

Nicola: It will remodel the anatomy of all the structures so that the nerve endings, the blood vessels, your lymphatic vessels and lymph nodes obviously. So there's a lot of, there's a huge impact as a result of the surgeries. And this is again, an area where we may be able to support alongside with [01:55:00] other members of the, the patient's team.

Nicola: But it is a multidisciplinary approach in supporting these cancer patients with the surgeries, and it is a quite a long recovery. Just briefly talking about the different types of neck surgeries that occurred and how we like progress from back in 1906 the radical neck dissection to treat metastatic disease, five levels of lymph nodes.

Nicola: And again, we've got not just the one level, but these lymph, these deep lymph nodes run, you know, very deep, deep location. So back in, you know. The early 19 hundreds, they removed all of the lymph nodes like we see now, where they're more selective when they remove lymph nodes for breast cancer patients.

Nicola: So instead of doing a total lymph node dissection and removing like 20 odd lymph nodes, they're now moving more into the sentinel node biopsy where they're just taking the most vital lymph nodes that need to be [01:56:00] removed to prevent metastasis. But you can see this would impact the spinal accessory nerve, your external internal jugular veins.

Nicola: The SCM all of these were removed and so it was a very, very drastic measure in 1960 to minimize this dysfunction and modified radical neck dissection was introduced and that preserved non lymphatic structures. And now we are moving into the realms of selective neck di dissection that goes even further by, by preserving one or more of the lymph node groups.

[01:56:34] Radiation and Systemic Therapies

Nicola: Radiation, numerous types of radiation. I was recently at a kind of roundup conference here in Denver and talking mostly about breast cancer patients, but I was learning about adaptive radiation therapy. It's a new kind of technique where they're using imaging feedback loop to accommodate for anatomical changes so that they can modify the treatment accordingly.

Nicola: Details of that, you can [01:57:00] see in the bottom of the screen, there's some notes on that research paper, but they were talking about using really noting that when people were having the radiation, the anatomy would change the location of all the different structures would change. So they need to try and change the target of the radiotherapy the radiation therapy.

Nicola: So as. Minimize localized tissue damage. But we are still seeing obviously the proton therapy, your stereotactic body radiotherapy, which is using IG guided imagery. The intensity modulated radiation therapy, something that is used more in head and neck cancer patients just because it's more precise and it can help reduce the damage to healthy tissues.

Nicola: And then sometimes we have the brachytherapy, which is the replacement of radioactive material in the form of the seeds and pellets that

damages the DNA of localized cancer cells. But I think what we're seeing more is the IMRT form of [01:58:00] radiation therapy. And I think this adaptive radiation therapy is certainly gonna move into the realms of head and neck cancer patients as per the conference I was attending a few weeks ago.

Nicola: Chemotherapy and immunotherapy. Now we, you'll know that's why we are here with S four Om that chemotherapy immunotherapy, you know, it's not just a localized side effect. It's a, you know, systemic side effect. So lots of different things can be happening here. Very little is known about the impact of chemotherapy and immunotherapy on lymphatic vessels.

Nicola: But what we do know is it has the possibility to disrupt lymphangion contraction. So remember those little tiny lymphangion that would fill up with fluid contract. We know that because of possible localized inflammation to these vessels that it could impact the contractibility of your lymphangion.

Nicola: But again, these [01:59:00] are just a few of the many chemotherapy immunotherapy medications that our patients with head and neck cancer will be taking. And again, some of them are more long-term, which can you know, hinder healing. And I think that's another important thing to think about with our head and neck.

Nicola: Can cancer patient, especially if they've had reconstruction or the radiation tissue, may take longer to heal as a result of any chemotherapy that they have had had to take because. That's what chemotherapy does. It just impacts the, the healing process as we all know.

[01:59:35] Patient Challenges and Rehab Team

Nicola: So what are our challenges for our head and neck cancer patient?

Nicola: I've highlighted here lymphedema and pain because I think these are the main areas that we as oncology massage therapists can certainly have some influence over and help support them. When it comes to the reduced range of motion, that's obviously gonna require some form of rehabilitation with a physical [02:00:00] therapist.

Nicola: We have the psychosocial factors, so speech communication is a huge impact of these treatments and the cancer in itself. I've had numerous people that I've referred to speech therapists as well as, working with their lymphedema

therapist so that they can, you know, the swallowing, the whole thing, the dysphagia, the difficulty in swallowing.

Nicola: I can never pronounce this, but I'm gonna try stoia. The dry mouth is a very common condition as well as o od odine, noia, I can never say this word. Also, the painful swallowing, trismus, difficulty opening a mouth. So you can see here all of this really they need more than just you know, as a us as a lymphedema therapist, they really need the rehabilitation of you know, a physical therapist and, you know, getting their range of motion back.

Nicola: We get loss of muscle, muscle atrophy because of lack of movement mucositis. So inflammation to the mucus [02:01:00] membrane that's gonna impact their nutritional you know, their ability to, to obtain. Optimum nutrition and that can then lead to further complications. They get nerve damage. Again, you can see the accessory nerve location here, close to the trapezius and the sternomastoid.

Nicola: This is where many of those lymph nodes are going to be. So if they do remove these and do a lymph node dissection and then they do surgery and then they do radiation, this accessory nerve is often impacted. So again, this the accessory nerve, it provides motor innovations to the SCM as well as the trapezius muscles.

Nicola: And as stated here, the impact on that and the upper, middle and lower trapezius results in weakness, paralysis, pain, and cosmetic disturbances. So again, you can see the whole picture of. You know, how these pe people are impacted by the treatments as well as the [02:02:00] cancer in itself. 'cause the cancer in itself can just grow and put pressure on the nerve endings.

Nicola: It can restrict mu muscle contraction. There's so many areas where, you know, any you know, tumor, any mass in this region will impact all of the functioning, not just your lymphatics, but your muscles, your nerve endings, and your, your blood vessels too. So I want to take some time now to look at the lymphatics in particular because this is beyond my scope.

Nicola: But just always be aware when you've got your head and neck cancer patient, all of this here is going to impact them. So you are going to want to work, make sure as best as possible that your patient is working with a whole team to address all these different things. And, you know, your role as an oncology massage therapist as well is that, you know, clients will have the ability to let you know what they're experiencing.

Nicola: You can ask them the questions and support them in, you know, reaching out for getting [02:03:00] all of the care that they need. So when it comes to lymphedema and pain, there's definitely, obviously as massage therapist, we have a. Huge role to play in, in maintaining a reduction in their pain as best as possible.

Nicola: But when it comes to lymphedema, this is something that, you know, you really need to have a bit more of an understanding of the lymphatic system. And if you are a manual lymphatic drainage therapist, we certainly do have a huge role to play, but it's also important to make sure that we are working with certified lymphedema therapist who's been trained in management of head and neck lymphedema.

[02:03:37] How Cancer Disrupts Lymphatics

Nicola: So just again, going over some information on how the cancer impacts the lymphatic system. So tumor growth can actually restrict lymphatic flow. So cancer and the impact on the lymphatic system. So cancer in itself can impact the drainage of the lymphatic fluid because it can just restrict lymphatic flow. Especially if [02:04:00] it is growing and compressing on localized lymphatic vessels. It's in lymph nodes that stop the lymph nodes from actually having their full function of filtering the fluid.

Nicola: And you know that we have, we do know that tumors can create their own lymphatic vessels. This is something that we, we discuss about lympho lymph angiogenesis, where tumors will actually grow their own lymphatic vessels. So it will take away from localized, help the lymphatic vessels and focus on growing its own.

Nicola: This is where many of these chemotherapy drugs go into angiogenesis or anti-angiogenesis to prevent blood vessel growth, as well as lymph vessel growth. And then surgery. The removal of lymph nodes, that increases the risk of lymphedema. As we know, lymph nodes filter our lymphatic fluid, and when you remove that lymph, those lymph nodes, the, the drainage and the filtering of the lymphatic fluid is hindered.

Nicola: And we get a buildup of that. [02:05:00] Protein rich fluid in the tissues that leads to lymphedema.

[02:05:04] Radiation and Lymph Damage

Nicola: Um, the problem with that with the lymphedema is obviously we get stasis of the lymphatic fluid that can lead to the risk of infection and cause fibrosis of the surrounding tissue. Radiation that can lead to interstitial fibrosis.

Nicola: So again, depending on the location of where the radiation beams are going to enter into, into the area. Most, more often than not, they're protecting the lung area, but sometimes if they need to come into an angle, we can get some localized damage to the top part of the lungs, which can lead to that interstitial fibrosis.

Nicola: Radiation can compress the lymph vessels, so again, where you have the radiation, it closes down the tissue. There's no space for any vessels to actually function, and so you're compressing any vessels that may not have been damaged, limiting the drainage. And then we, we, we get that mechanical dysfunction of [02:06:00] the lymph vessel contraction.

Nicola: The ability for lymph fangio contraction is reduced. Chemotherapy can weaken the vessels. It impedes lymph flow and possible inflammation of those vessels just slows down that lymphangion contraction.

[02:06:15] Immune Activation and Cytokines

Nicola: Um, what I do just want to mention, and, and again, this has come from some of the conferences that I've attended of recent, is that what radiation actually does is it activates or initiates your innate immune system.

Nicola: So it kind of, it ramps up the production of your macrophages and your dendritic cells. But it also will produce a lot of inflammatory cytokines that can inhibit sorry, that can inhibit your lymph angio contraction. So when there is that cytokine storm, which we all heard about during COVID when those cytokines can just create more of that inflammation and then reduce that [02:07:00] lymphatic flow.

Nicola: So radiation has the potential to. Kind of ramp up your immune system, you know, figure out what it needs to do to remove any potential damage of the cells, and then it would just lead to unfortunately more inflammation into the tissue areas.

[02:07:19] Internal vs External Lymphedema

Nicola: Um, so lymphedema, I'm sure you're all aware of lymphedema.

Nicola: Lymphedema is a chronic progressive disease that is caused by the abnormal accumulation of your protein-rich fluid in the interstitial. That will lead to a reactive fibrosis and chronic inflammation. It does require early intervention and a chronic care model for long-term management. Now, what I want to bring to your attention here is that a lot of the time we think that lymphoedema is an external thing.

Nicola: It's something that we can palpate and we can see it and, you know, visually and, and our clients often, or our patients often say, you know, I can feel [02:08:00] a little bit of difference, a bit more puffiness in the tissue. But what can often happen with head and neck lymphedema because of the location of all of these lymph nodes are all often impacted by the treatment for cancer, the internal workings of the head and neck region, the tongue, the tonsils, the esophagus.

Nicola: All of these areas can develop internal lymphedema. And again, we don't see it from the outside, but internally there are. They're experiencing a, a, a disruption to speech, possibly. The swallowing of food. There's just so many different things that can happen when it's an internal lymphedema as opposed to an external that we are thinking we can palpate.

Nicola: So these are some, you know, again, we're gonna, at the end of this, end of this PowerPoint, there's a slide about things that you can ask your clients, things that you can ask them to maybe refer out. And this is something that [02:09:00] I do a huge amount because I am limited on what I can do as a lymphedema therapist.

Nicola: I want to make sure I have that multidisciplinary team to support the patient as much as possible.

[02:09:12] Infection Risk and Prevalence

Nicola: The problem is as well, when we get this buildup of this abnormal accumulation of that fluid, it provides this fertile breeding ground for further bacterial growth. So again, this is where we get that risk of infection.

Nicola: And again, we have a reduced localized immune function because of the loss and or damage to the lymph nodes. And so it places the patient at risk of infection, especially when they have wounds that aren't healing and radiation, as we all familiar with the effects of radiation, the damage to the superficial tissues as well.

Nicola: It creates that area for possible infection. So we really want to get the lymph moving as much as possible and support. The lymphatic system as much as possible to get it back to some sense of normality so [02:10:00] that with the, there is some good functioning. This is just showing you some of the studies that were done about, you know, the incidents of head and neck cancer head and neck lymphedema, sorry.

Nicola: As a result of head and neck cancers. And, you know, 90% of patients have head and neck lymphedema. One year post-cancer treatment. 75% are moderate to severe, and 47% of these people have fibrosis. Now, again, this is something that. Really needs to be worked on. A lymphedema therapist will have the tools and the education in order to work on this in an effective and safe way.

Nicola: But as a massage therapist, as an oncology massage therapist, or even an MLD therapist, there are certainly things that we can do to support you know, remodeling of the tissue and support. Optimum lymphatic drainage. But again, we do have some of our limitations, but it's, it's important to understand, you know, [02:11:00] this is a huge number.

Nicola: 90% of patients that have that lymphedema one year post and probably don't know what the signs and symptoms of that are. And that is something that we can help support them and educate them. And again, in gen gene Zal in 2021, internal lymphedema impacts 97% of individuals to some degree. So it's really important to recognize that this lymphatic dysfunction from a head and neck cancer treatment is not always external.

Nicola: A lot of the time it is internal too.

[02:11:34] Lymph Nodes and Watersheds

Nicola: This is the a a o, they're the classification of cervical lymph nodes. Again, none of us here I don't think are lymphatic surgeons, so we don't need to know a huge amount. But just giving you an idea, an overall picture of the location of the different lymph nodes and different sections that they've been divided into.

Nicola: And obviously, depending on where the tumor is and where that, what lymph nodes that tumor drains [02:12:00] into will obviously be determining, you know, which lymph nodes are removed, where the re radiation is gonna be. So again, lymph nodes removed during tumor removal, or based on patterns of metastasis that are predictable relative to the primary sites of disease.

Nicola: So we can see they extend all the way from those superficial lymph nodes here, submandibular submental, going into these deeper levels of lymph nodes all the way down to your supraclavicular region. These are just a couple of photos of people experiencing head and neck lymphedema following their treatments for head and neck cancers.

Nicola: And as you can see, the, again, coming back to those watersheds, this fluid is not gonna cross these watersheds. That's what these watersheds are designed to do, to keep the fluid in those regions. But when you have, you know, all of this happen in the head and neck region, we are gonna get that buildup of fluid in these areas.

Nicola: And this can impact quality of [02:13:00] life in so many different ways.

[02:13:03] Referral and Safety Basics

Nicola: I just want to make it very clear here that when you have a client presenting with lymphedema, you should always refer them to a lymphedema therapist, certified lymphedema therapist, because the treatment for this requires specialized training in all areas of lymphedema management.

Nicola: And again, that will include compression, bandaging, skincare management, which is vital and specific MLD techniques. So as much as we want to help our cancer patient and support them with any of these impacts that they have from their treatments, from lymph from head and neck cancer, when it comes to the lymphedema side of things, it really does need some specialized training to give them the full scope of, of healing and recovery.

Nicola: But there are certain things that we can do. Particularly for you know, other areas away from the impacted site of the surgery or radiation. [02:14:00] So considerations edema is going to be something that they obviously are going to experience that's gonna obviously lead to the lymphedema when there's lymphatic system that has been damaged.

Nicola: But any edema can be managed with MLD. I don't know how many of you have had manual lymphatic drainage training, but if you have, you will be aware of these drainage pathways. There are collateral pathways that we can use. Radiation the gift that keeps on giving. So I've been told so many times, you need to wait at least six to eight weeks post-radiation before you can apply any manual lymphatic drainage.

Nicola: You can work around it, but the skin needs to heal, and I'm sure you are all familiar with that. When it comes to oncology massage as well. Thermal modalities are an absolute no go on irradiated skin. And if there's a, if there have been skin grafts from many areas, you need to also take precautions there.

Nicola: And also just be sensitive to how [02:15:00] radiation and chemotherapy can affect the patient. There is gonna be some definite hypersensitivity to touch. There may be numbness and lack of sensation in the affected areas too. These illustrations here are just showing normal lymphatic drainage pathways to the groups of lymph nodes in the head and neck area, both anterior and posteriorly.

Nicola: But in it is important to know that with your head and neck cancer patients, this requires a lot of adaptation.

[02:15:33] Scar Tissue and Fibrosis

Nicola: Scar tissue management is also a very important part of their recovery and rehabilitation. Scar tissue can diminish lymphatic function. I often describe it in my classes as it's like a beaver that builds a dam on a river or on a stream and you get the, a reduction in the flow of the water. And that's basically what scar tissue is doing.

Nicola: It's hindering [02:16:00] that, that drainage. So it's slowing it down. And if you add that to lymphatic lymph node removed and radiation, then you've got like a, you know, a lot of damage to the actual lymphatic drainage and that's gonna impede it a huge amount. There are some discussions around the fact that the lymph lymph vessels do regenerate.

Nicola: And again, I'm not talking about your major lymphatic vessels, but more of your smaller lymphatic vessels, they will regenerate. That's what lymph angiogenesis can do. So there is some discussion in the field that the earlier the intervention around scar tissue and fibrosis. You're going to create more lymphatic vessels that can support good drainage.

Nicola: It may remodel the structure and the drainage pathways, but there is that possibility that we can, you know, create or you know, enhance further lymphatic [02:17:00] vessel production. One of the key component components of this treatment must be scar management. Scar management is essential, and there's various ways.

Nicola: A, a lymphedema therapist will address this with various tools and applications of compression, et cetera. The treatment when you are working with the scar tissue should also facilitate the use of larger lymph node groups for primary drainage. So we can talk about, you know, if there's all this you know, buildup of fluid in this area.

Nicola: We can often cross watersheds. We use anastomosis when we are talking about from one axi to another, but we can also use the axillary lymph nodes when we have a huge buildup here, either bringing the fluid down anteriorly or posteriorly. And scars or tissue with radiation induced fibrosis can be carefully manipulated after they are well healed.

Nicola: So again, this is something that we just don't go in straight away. We palpate, we observe and we monitor. [02:18:00] In order to do some of our scar tissue mobilization work. But again, I will cannot reiterate this enough that this is a really important role for a lymphedema therapist. We can, as a massage therapist, we can help support them and do the work, but it's really important to communicate at the same time.

[02:18:20] Adjunct Therapies and Team Care

Nicola: Additional treatment techniques that are often used to support their head and neck cancer patients'. Myofascial release, again, being mindful of the damage and changes to the tissue. Soft tissue mobilization, again, that's often coming from a physical therapy point of view. Trigger point release. Kinesio tape applications.

Nicola: Kinesio taping has become very popular in the world of lymphedema. Because we can create new lymphatic pathways as well as being able to you know, work on some of that fibrosis. The thing with kinesio, taking particularly head and neck areas and radiation, you've gotta be mindful of tissue sensitization.[02:19:00]

Nicola: And that's something that again, you need to really wait, make sure that the the tissue is healed. Low level lasers have been brought into use and the lympho touch, which is a negative pressure mechanical vibration machine, that can create some space between the tissue. Particularly helpful when you have fibrotic tissue and hyperbaric oxygen.

Nicola: Oxygen chambers are also used. This is particularly helpful when patients have experienced radiation to the jaw area and the damage from the radiation often impacts dental health. And with that, we are gonna have even more complications, which needs to be addressed. So the hyperbaric oxy oxygen chamber, I'm having difficulty with my words today, the HBOT for short.

Nicola: That will help create better tissue healing. And I know that it's used more often for bone health, particularly in the jaw area as a result of the [02:20:00] treatments for the oncology client, for the head and neck area. So again, reiterating a multimodal approach with interdisciplinary collaboration.

Nicola: These, this is just essential to the recovery and the quality of life for this patient population. So recognizing that it's just not, it's not just one of us that's gonna do the work. We need to collaborate, we need to communicate and help the patient navigate this journey. Of not only the diagnosis, but also you know, the path in which to get the, you know, the best level of rehabilitation and promote good quality of life.

[02:20:40] Client Screening Questions

Nicola: So as a massage therapist, you know, how can you help this client population particularly, and I, and I'm talking to, you know, those of you that have had manual lymphatic drainage training and those of you that haven't, as an oncology massage therapist, there are. So many ways in which we can [02:21:00] help and support.

Nicola: I've put down here a list of questions that you might want to ask your client just to know whether is it appropriate for me to do any work? Do I need to refer out what other modalities does my patient require in order to get the best quality of life and, and to move forward. But if there are any changes in sensation, is there's a, if there's a sudden numbness if there's more tooth pain, for example, tooth sensation as a result following radiation, if they're experiencing pain, where is the pain?

Nicola: How intense is the pain? Do they need to refer back to their their oncology providers to check out what that pain is? Or is it just pain because of positioning? And you know, even. With the surgery and radiation, the upper back muscles, the shoulder girdle, all of these areas are impacted. So sleeping mobility is all impacted, which can then lead to pain as well.

Nicola: [02:22:00] Globus, that's that feeling of there's a possible obstruction, like a lump in the throat. There's no obstruction there, but they can often feel like that. That again, could mean some kind of internal lymphedema. It could mean numerous other things, but that again, is something that should be investigated.

Nicola: The difficulty swallowing again, the muscles the swallowing muscles. I mean, there's so many different muscles that are involved and different structures that are involved, but there could be some internal lymphedema there that requires, the use of a certified lymphedema therapist to, to address that.

Nicola: Also, speech therapist. I cannot reiterate enough the use of a speech therapist who will not only help with speech, but also the swallowing, the chewing, the whole thing. I work with a really good speech therapist out here in Colorado for my patients when I feel they need that referral, a change in their voice.

Nicola: That can also happen as well. The mastication, the chewing that may be an issue. And again, we have a, a touch very briefly on the issues [02:23:00] around mastication and chewing and how that can impact nutritional requirements and possibly lead to malnutrition, which can then lead to further complications with other systems in the body, particularly the lymphatic system if we have that issue of hypo protein, anemia, and then any other symptoms that may be they're experiencing.

Nicola: If we need to refer out.

[02:23:25] Massage and MLD Support

Nicola: So a couple of things here really just to, you know how as a massage therapist you can help this client population, you can be very influential in supporting the client's relaxation. As you all know, I'm preaching to the choir here, probably with your oncology massage and some subtle aromatherapy.

Nicola: I do practice aromatherapy. I'm a certified aromatherapist, and I use my aromatherapy when appropriate. And the reason I put subtle here is because

sometimes the aromas can be too strong. Again, tissue changes. You don't wanna [02:24:00] be applying essential oils to any tissue that is damaged until you know, you get the, go ahead from the oncology team or you've done patch tests.

Nicola: That's a probably another whole topic of conversation, but, you know, oncology massage, some subtle aromatherapy to aid relaxation. Relaxation is a key thing. If you have manual lymphatic drainage certification it's okay to work on the healthy tissue in the healthy tissue regions. And again, making sure you're working alongside a certified lymphedema therapist.

Nicola: So MLD can be really, really helpful. Again, you know, your goal with MLD is to, to remove that lymphatic fluid from stagnation. You can always incorporate abdominal breathing techniques to stimulate your deeper lymphatic drainage. As many of you know, the thoracic duct that drains three quarters of the body is located in the upper abdominal region.

Nicola: And when we do deep diaphragmatic breathing, it is known to [02:25:00] stimulate that deeper lymph drainage clearing into your thoracic duct that can help support you know, the overall movement, the full movement of lymph throughout the entire body as well as the head and neck. Again, we are not, physical therapists, I don't know, maybe there are some physical therapists here, but encouraging their, your clients to sleep on a healthy side to try and, you know, just having that discussion.

Nicola: So when you are, they're in your clinic and they're on your massage table and positioning is gonna be a huge thing, which we'll talk about a little bit more. But when you are working on them in your practice, getting them used to and talking to them, encouraging them to try and sleep on the healthy side.

Nicola: If they can't like lie flat with some elevation to the head, it's something to consider when you're treating them. But also for them to consider and discuss that with them in their home environment. Hopefully the rest of their rehabilitation team will be, [02:26:00] providing that information too. But you know, as oncology massage therapists, we just have a really, generally a, a really good connection with our clients and they listen to us a great deal as well.

Nicola: And so if we can reiterate the importance of really, you know, sleeping, getting comfortable, but also aiding, aiding good drainage is also a very helpful thing for us to do. So really, you know, they trust us. So, and also providing awareness to the client of tissue changes. And I think we mentioned that before, you can see the changes in the tissue.

Nicola: You can see if there's, you know, extra redness or extra edema in a place and just helping be their advocate to make sure that they get the correct and appropriate. Therapist or practitioner that can help them moving forward. So there's lots of things that we can do as a massage therapist. If you have your, your training in manual lymphatic drainage, there's lots [02:27:00] of things we can do with this too.

Nicola: We can support and improve range of motion. So again, we all know that manual lymphatic drainage can impact the nervous system impacting the nervous system from the point of view of switching off your sympathetic, activating your parasympathetics of resting and digesting, but also, you know, range of motion if there is a edema formation or if there is some restriction in any of the musculature that's been impacted from these treatments.

Nicola: Just some subtle MLD can help just release that area, calm down the nervous system, and maybe give them better function of the the muscles involved, we can help improve speech and communication, improve nutrient intake because again, we are, you know, possibly, you know, getting all of the lymph moving, reducing some possible internal lymphedema, external lymphedema.

Nicola: They may be able to open their mouth more. I had a client once who had sali [02:28:00] gland cancer, and again, he was a candidate for the the HBOT, the hyperbaric oxygen chamber, and, he, you know, he had a lot of issues and he had a lot of fibrosis to the neck area. But one of his big things was a dry mouth.

Nicola: Again, the Xerostomia. And he found that when I did manual lymphatic drainage of him, he, his saliva grounds were, were working and he salivated and that he said would help him in being able to actually have food in his mouth and to be able to chew. So again, that was, you know, after a couple of manual lymphatic drainage sessions.

Nicola: So there's so many different areas that MLD can come into play. Pain management, as we know MLD can really impact and help reduce pain. We can decrease fibrosis by getting that stagnant lymph fluid moving around. We can improve tissue health and reduce the risk of infection because again, when we've [02:29:00] got radiation and when we've had surgery, we've got lymph nodes been removed, we've, we've lost the ability for immune immune function in that region.

Nicola: We also get the difficulty in swallowing, dry mouth, painful swallowing. I'm not gonna try and pronounce all these words again 'cause I may get them wrong. But anyway, you can see what can occur in this area. And then with manual lymphatic drainage, we can, and again, we are not about curing, but we are here to help with symptom management.

Nicola: And you know, this a study which you can see at the bottom of the screen here. This was I listened to Dr. Eva Crich. Aka did a presentation some time ago following the study that she did with her colleagues. And it basically, this was discussing the treatment of lymphatic dysfunction in cancer patients and they focused on breast and head and neck cancer patients in particular.

Nicola: But it was quite interesting about the discussion about we have the [02:30:00] possible ability to restore lymph vessel and promote anti-tumor activity by interve intervening early and bringing in some of our hands-on techniques with manual lymphatic drainage that can actually support this process. And I found it to be a really interesting, interesting study and interesting paper and quite easy to read. So that's manual lymphatic drainage for your head and neck cancer patient.

[02:30:26] Positioning and Drainage Pathways

Nicola: And then just to think about positioning considerations, what we can do when applying, whether it's manual lymphatic drainage or whether it's massage correct elevation of the client's head at home and in clinic.

Nicola: I mentioned that earlier. I think that's really important to recognize. And you can do a lot of work. I do a lot of work with my patients. The back of my table does, elevate, we can incorporate the abdominal breathing techniques. Anybody can do that. And again, you know, you're not gonna push your client, your patient to the extent where they feel like they can't breathe.

Nicola: [02:31:00] But slowly and gently just get them to incorporate it in the sessions. And it's also part of what they can do to help themselves at home. And also, as we know, relaxation is really something we can also get from deep diaphragmatic breathing and work below any indurated tissue. So again, if you and again, I've not got the ideal picture here to show, but if you've got all that fibrosis and edema in this area, you know, you can work below this area, do some drainage.

Nicola: Below the clavicular watershed and may possibly drain down to the axi. If you can't go through the front area here, you can go posteriorly and around past the shoulder into the axi if you have a lot of that fluid here. And this is something that I've done quite a few times in bringing the fluid back 'cause it can't go down because of the the radiation fibrosis and a lot of the time this tissue from radiation when they've targeted those lymph nodes.[02:32:00]

Nicola: This tissue is just solid. It's like, it's like a piece of wood. It's just, it's immovable. So we can drain posteriorly posterior work in a sideline position or with elevation, posterior neck, posterior neck if the skin is intact. And again, you've gotta remember with radiation our entry point and our exit point we can incorporate some myofascial release techniques to the trapezius.

Nicola: Avoid cervical lymph nodes until those, you know, radiation has completed. And even then you need to palpate the tissue. But we now know that lymphatic vessels do find collateral pathways, and the information is changing on how we work over radiated tissue and scar tissue. From the point of view, we don't want to do it immediately, but once the tissue is healed, we may be able to promote.

Nicola: You know, lymph vessel formation and, you know, incorporating some collateral pathways. [02:33:00] If there's any contracture anywhere, again, avoid that. And remember, wounds do take time to heal. Sometimes they don't heal at all. And I think I mentioned earlier, chemotherapy can play a role in poor wound healing just because of the overall systemic inflammation to the vessels that that can cause.

Nicola: And radiation fibrosis is generally different to normal fibrosis. And again, we've got complete dehydration of the tissue. And I think that's another important thing to consider here, that where there has been radiation, it can take up to a minimum of two years for the tissue to fully rehydrate again.

Nicola: So there's gonna be a lot of lack of pliability, dryness. And, and again, we, we just need to really modify our treatments. Around the radiation fibrosis. So just remember, it's not gonna be thick and dense like fibrosis that forms with lymphedema. Often it's just very hard. No [02:34:00] movement to the tissue, but very thin, easy, breakable skin.

Nicola: So we need to be again, if that's not part of your expertise and it's not part of your training, always refer out to a certified lymphedema therapist. And so if you are performing any manual lymphatic drainage to an area where you may have the scar tissue or lymphedema here, reconstructive surgery.

Nicola: We can bring it down into the supraclavicular lymph nodes here. We can also then maybe cross this clavicular watershed, bring it down and into the axillary lymph nodes. And like I mentioned, I forgot to put a posterior picture on here, but if you know this area, maybe they have a port in place that's you know, hard to, to work around or there's too much scar tissue here and there's too much the, the tissue is too delicate and still healing.

Nicola: We can come posteriorly around the back of the trapezius and anteriorly, [02:35:00] sorry, posteriorly in towards the axillary lymph flow tear. And again, this is also showing if you've got, you know, drainage this way, you can go to the back. If you've got that buildup of fluid here, you can come this way over scar tissue again, if it is a very difficult one here, because we are starting to work.

Nicola: Towards remaining lymph nodes. It's something that we are teaching in the MLD certification training. We used to avoid lymph nodes that had been impacted and avoid the whole region. Now we know that those remaining nodes still work. It's okay to work some drainage to towards these areas, but it's also important to remember to use other pathways as well.

Nicola: And this is something that you know, many lymphedema therapies are now, again, palpating the tissue, ensuring that it is safe to go back over the scar tissue. But we know from Dr. Eva Cvic. Discussion in her [02:36:00] paper, how we can help remodel some of the lymphatic structures, some of the lymphatic vessels when we do apply some of our more gentle skills.

Nicola: So again, we can treat axillary lymph nodes on the affected side. You can treat the upper chest or upper back with circles and bring the fluid down into these lymph nodes. You can treat the supraclavicular fossa bilaterally unless we've got you know, radiation or surgery here, and the tissue is not, you know, we, we can all palpate the tissue, know whether it's safe to work over that area or not, or we can work one side and then we can treat posterior neck and occipital lymph nodes as applicable.

Nicola: So again, it's all about looking at what our patient is experiencing, what their needs are, and adapting and. Again, I'm probably preaching to the choir once again. But when we do this work with our oncology clients, it's all about adaptation and making sure that our [02:37:00] client is fully comfortable.

[02:37:03] Wrap Up and Next Steps

Nicola: So that brings me to the end of this presentation on how head and neck cancers can impact lymphatic function. And I hope that I have provided with you with sufficient information and if it, this is a new area. If this is a new topic for you maybe you're seeing more and more head and neck cancer patients and they are coming to you, I really would recommend that you collaborate.

Nicola: With other therapists in your area, maybe even get some information and get some training in lymphatic work and support your clients as best as possible. Thank you again for listening. Appreciate it.

[02:37:42] Head & Neck Cancer: Fascia, Scars/Fibrosis and Lymphstasis with Cathy Ryan

[02:37:42] Welcome and Overview

Cathy Ryan: Hi, I am Katherine Ryan Ka. Kathy, I'm a registered massage therapist. I've been in practice for 35 years. I've been a massage therapy educator for three, three years. I'm really thrilled to be here. We'll be chatting about some stuff and I'll be hanging around at the end for the live q and a. So I [02:38:00] look forward to seeing you there.

Cathy Ryan: I am coming to you from the WestEd traditional territory in beautiful northern British Columbia, Canada. Thank you very much to the organizers at S four OM today. I'm gonna be talking about the relationship between fascia fibrosis and lymph stasis, and from a massage manual therapy perspective, how this applies to our clinical practice.

[02:38:27] Wound Healing Stages

Cathy Ryan: So just to begin, just a quick overview of the stages of wound healing and scar formation. Irrespective of trauma etiology. So whether we're talking about a surgery or a burn, including radiation burns our body has one way of reconciling the damage to the tissue. And that is with the, through the complex for overlapping sequence stages of wound healing.

Cathy Ryan: And there's relative timeframes associated with these. And again, everything in context, the more significant or expansive the trauma to the tissue. Some of these timeframes might be [02:39:00] pushed out a little bit longer. So

in these three stages, we see the typical things that happen during inflammation, where we see release of growth factors and, our body's working to clean up and repair, begin the repair process and regeneration process, and all the classical signs might be present.

Cathy Ryan: In the proliferation stage, usually about a week or so into injury water will start to lay down fine pro collagen, which constructs a provisional matrix, which is essentially a blueprint or framework that will support neural, circulatory, lymphatic and regeneration and the repair or re reconstruction of the tissue that had been injured or damaged as a result of some kind of assault.

Cathy Ryan: And then the final stage is remodeling and generally speaking. This begins at about usually roughly about four weeks out where our body starts to really get into the nitty gritty of replacing tissue that has been [02:40:00] injured or damaged. Now, certainly with different types of tissue, these timeframes are a little bit different.

Cathy Ryan: Skin for example, much faster process because the body's working really hard to close any kind of gap that a form invader might be able to get in. Whereas in some of our deep, deeper collagenous tissues, the tissues that we commonly address in massage and manual therapy practice, the process might be just a little bit different as far as timeframes go.

[02:40:26] Scars and Fibrosis Basics

Cathy Ryan: So when we talk about scar tissue, I often will simplify this into two, two types of categories, what I call functional or problematic. So the remodeled tissue in the tissues that we commonly work with in our Manus. Therapy massage therapy practice is constructed back together by largely type one collagen.

Cathy Ryan: And this will return as close to possible pre-injury continuity configuration and function. As well, the generation of fine nerve blood and lymphatic vessels is necessary to supply this newly formed tissue in order for that tissue to be able to. [02:41:00] Function and be healthy for what its purposes are.

Cathy Ryan: So when all goes extremely well, this is what I would call a functional repair or a functional scar, but the outcome isn't always repair that supports function. Sometimes it's a problematic scar or a pathophysiological scar that might in some way impede function.

[02:41:22] Fibrosis in Practice

Cathy Ryan: This brings this to fibrosis, so irrespective of etiology or scar type.

Cathy Ryan: So regardless of what constituted the trauma to the tissue or scar type at the skin level, we'll often hear terms like hypertrophic or keloid. Deeper in the body, we might hear terms like adhesion. Essentially fibrosis is the hallmark of pathophysiological remodeling. So you know, that is essentially the physicality, the physical representation of what we would describe as a problematic scar.

Cathy Ryan: And fibrosis can occur in all manner of collagenous tissues. For example, axillary webbing or cording syndrome is [02:42:00] considered to be fibrosis of the fascial sheath surrounding lymph, smaller lymph and or small veins and dysregulated remodeling or fibrogenesis can persist through years. So with respect to bringing it into, you know what our.

[02:42:16] Fibrosis in Head and Neck

Cathy Ryan: Talk is focused on today with respect to head and neck cancers, so radiation induced fibrosis. How we may see this present in our clinical practice are a variety of issues like trismus, dysphasia, dysphonia, or lymphedema. So these are some of the issues that we can see that happen as a result of fibrosis in the head and neck area.

Cathy Ryan: And as well, I think it's important to consider that especially in oncology, oftentimes you're working with patients who have more than one potential component that might be contributing to fibrosis or surgery. Radiotherapy, chemotherapy. So all of these things potentially can factor into the presentation that we might see in that clinical practice.

Cathy Ryan: Generally [02:43:00] speaking, when we talk about problematic scarring, oftentimes there's an association with what would be considered hyper proliferation of collagen, meaning an overproduction of more collagen fibers than what is essentially. To get the job done, like in a hyperopic scar, for example. But what we see with fibrotic collagen are some, in addition to the hyper proliferation, there are also other alterations that we might see in fibrotic collagen, like changes in fiber diameter.

Cathy Ryan: The normal crimp formation in collagen is altered in some way. The orientation of fibers might be atypical to what you typically might see in that particular chunk of tissue or region. There might be. Problematic or pathological crosslinks the fibers are often under hydrated or quite stiff and as well, they might have a rough rub, bumpy ropey feel or look to them.

Cathy Ryan: So on the right there in the black and white image, you can see actual fibrotic collagen has that ropey. [02:44:00] Rough, bumpy feel that we often can, if something's fairly close to the surface, we can feel that with our hands. Versus on the far right there, what collagen looks like when it's not fibrotic.

Cathy Ryan: I often refer to this as QQOJ, so changes in quantity, quality orientation, and giness.

Cathy Ryan: So some of the consequences that we see with fibrosis are undesirable scar characteristics or aesthetics, mouth sliding. So those of you who are fascial nerve with myself mouth sliding or gliding will be familiar to you. And then as well, we'll see certain contracture restrictions adhere.

Cathy Ryan: Adherences compression that might have other functional implications. One of the ones that we're gonna really focus on today is what I talk about is patency. So the spaciousness in tissue. So again, if we look at the illustration up in the corner, you can see in that area of problematic scarring.

Cathy Ryan: The tissue, the collagen fibers are more. [02:45:00] Densely compact, compressed together, a little bit of distortion there. So the orientation is different and this can potentially have an impact on anything that is traveling through that tissue. So whether it be blood vessel, lymphatic, vessel of nerves, if they're traveling through tissue that is more compressed that potentially can impact function.

Cathy Ryan: And one of the things that it can impact is movement of lymphatic fluid, which is. Menis, which is the second thing on our list today, have things to talk about.

[02:45:30] Lymph Stasis Explained

Cathy Ryan: So let's talk a little bit about Menis. So this is a often referred to as a localized impaired slowing and lymphatic flow after some kind of injury or trauma to tissue, such as surgery or radiotherapy.

Cathy Ryan: And it can be resolved if identified and treated early. And the key there is identified. So those of you. With lymphatic training background, lymphatic drainage, training background have great eyes and hands for recognizing what this congestion or stasis looks like in the tissue, [02:46:00] and if left unmanaged may lead to the development of fibrosis.

Cathy Ryan: So by fibrosis can lead stasis, lymph stasis can lead to fibrosis then as well might see secondary edema as a result of an unresolved lymph stasis situation. So we're talking about compromise flow or tissue congestion as stasis. So we're not talking about that immediate sort of swelling after, with acute inflammation and initially right after injury.

Cathy Ryan: And we're not talking about lymphedema and, but the reason why I have a photograph of, marshmallows up there is because again, those of you who work within, this realm and have this lymphatic drainage background training, that's essentially what the tissue feels like when we've got this congestion or lymph stasis is happening.

Cathy Ryan: When we press into the tissue, it almost feels like a stale marshmallow. Is the the thought that comes to mind.

[02:46:56] Superficial Fascia Link

Cathy Ryan: And now the third part of our trifecta here today. So we're talking [02:47:00] about fascia fibrosis and men stasis, in particularly looking at the superficial fascia, which is just under the skin.

Cathy Ryan: And the reason why we're highlighting this today is because the vast expanse of the superficial lymphatic network tracks through the superficial fascia which also makes it very accessible with respect to our hands because it is closer to the surface. So it has suggested alterations in the superficial fascia can compromise lymphatic flow, contributing to fibrogenesis.

Cathy Ryan: Fibrogenesis can potentiate stasis can potentiate fibrogenesis, and both are implement implicated in problematic scarring and secondary lymphedema. According to Roxane clinical hallmark in lymphedema patients is the predisposition for in the presence of elevated. Extracellular matrix deposition fibrosis.

Cathy Ryan: So we see fibrotic collagen and ECM interstitial speaking where, can have an impact on flow of prelim fluid as well as [02:48:00] the lymphatic

structures, in various tissues as well. Fibrosis is considered both a phenotype and driving force in secondary lymphedema pathogenesis.

[02:48:11] What Drives Lymph Flow

Cathy Ryan: So let's talk a little bit about lymphatic flow. So just gonna look at three things that potentially can impact flow of lymphatic fluid. One is patency and patency. I break down into two components, so talking about patency with respect to what I had mentioned earlier. So if we've got regional tissue that it's a little bit more loose connected tissue space in there better potential for flow if we start to compromise that space that, or the patency that potentially can have an detrimental impact on flow and as well patency of the vessel lumen itself.

Cathy Ryan: So we know that there got vessels that have an open line if that's more compressed that. Can also compromise flow and then as well pumps lymphatic pumping, both intrinsic and extrinsic and as well valves. These are all things that can potentially have an impact on lymphatic flow [02:49:00] or lack thereof.

Cathy Ryan: Just a quick mo note on interstitial patency. What we see in fibrotic tissue is a denser extracellular matrix and abnormal spatial arrangement, or alter patency, which, as I mentioned, can compromise blood flow and lymphatic microcirculation. That image on the right there is from JC Berto.

Cathy Ryan: So we see this loose connect. The tissue collagenous network under the skin where you can see in red the blood vessels. Unfortunately, they don't have the emphatic vessels in there, which is often the case with these things. They're in there. If there's blood vessels, there's emphatic vessels and small nerve tract there as well.

Cathy Ryan: So if we reconcile if that top layer. Compress it down towards that. In this particular one, it's a tendon. But if it compresses that space we can certainly understand how that could have a detrimental impact on flow.

[02:49:58] Patency and Lymphangiogenesis

Cathy Ryan: So patency [02:50:00] compromise, interstitial, pre lymphatic plus. Pathways or flow channels may be impacted in lymph angiogenesis.

Cathy Ryan: So according to Boardman and Schwartz, what they, one of the things they identified during wound healing, interstitial fluid channeling

proceeds and may direct lymph angiogenesis, which means that yes, our smaller lymphatic vessels do regenerate after they've been interrupted or there's removal.

Cathy Ryan: There's a bud. Process that happens from nearby lymphatic structures and it leaves its way through tissue to get to where it needs to go. But from their observation, they identified that the flow channels need to be established in the interst first, and then the lymphatic vessels will.

Cathy Ryan: Regenerate parallel to those flow channels. So for me, this begs the question during wound healing, what impact might massage manual therapy MMT have on preserving or supporting interstitial patency, thereby supporting or preserving flow [02:51:00] channels and subsequent angiogenesis. So these are questions for which I have no answer, but certainly questions that you know, I think.

Cathy Ryan: There's a physiologically plausible leap, let's say, we could possibly make that if there's, if our hands can have some kind of impact on the openness of a patency of that, say the superficial fascia. That may have some kind of implications with respect to supporting lymph angiogenesis or the regeneration of new lymphatic vessels.

Cathy Ryan: And my other question, what is the impact of impaired lymph angiogenesis on newly forming scar tissue or on mature problematic scar tissue? And might this be, some kind of interference with meth angiogenesis might just be a contributor to non or poorly resolving fibrosis and mature scars.

Cathy Ryan: Again, these are questions. This from Dr. Jeffrey Bove had a chance to have a conversation with Dr. Bove at one of the fascia Congresses. And we were just chatting [02:52:00] and I said, what are you seeing that's interesting, in, in your lab? And he said one of the things that I'm observing is that newly forming nerves have a hard time pushing through dense, fibrous tissue.

Cathy Ryan: So of course, the light bulbs are going off in my head and he knew that would probably send light bulbs off in my head. And, so the question, that I have is, so these fine nerve blood and lymphatic vessels often live very close to one another. So if there's some kind of issue with these newly forming nerves, pushing through dense fibers tissue, is this possibly the case with respect to newly forming lymphatic and blood vessels as well?

Cathy Ryan: Again, another question. So here's just a again, just clinical consideration, something for us to think about and this is an MRI of a patient presenting with late lymphedema. Essentially, this person has a normal, healthy, intact working lymphatic system, meaning that this is not someone who's lymphatic system is compromised as a result of say some kind of cancer treatment or [02:53:00] someone who already has established edema.

Cathy Ryan: So essentially a normal. Working lymphatic system and their, what they observed is an area of dermal stasis or backflow around an area of a surgical scar. So the questions that come to mind for me are is this patency issue impacting flow? Because the limp capillaries are there, they've regenerated, but they're being somewhat.

Cathy Ryan: Compressed their patency, the lumen of the vessels themselves is somewhat narrowed because of dense, restrictive tissue around them. Or is it a case where lymph angiogenesis has been impaired due to dense extracellular matrix, altering the reestablishment of interstitial flow channels?

Cathy Ryan: And then of course, the big question is, if either of those are a reasonable, consideration, can early intervention from a massage manual therapy perspective either [02:54:00] temper or prevent this kind of situation from happening in the first place? Again, more question. Patency. So talk a little bit about interstitial patency now we'll talk a little bit about the vessel patency itself.

Cathy Ryan: So on histological examination of lymphatic vessels showed fibrosis, sclerosis of collecting vessels in areas of lymph stasis. So again, here we see another implication of lymph stasis and how that potentially might impact not only what's happening outside of the vessels, but also internally the patency of the vessel itself.

[02:54:37] Pumps Valves and Pain

[02:54:37] Pumps Valves and Pain

Cathy Ryan: Moving on to lymphatic pumps. So we know that the lymphatic system manages flow by a series of two types of pumps, ex extrinsic, which I think is what most massage therapists who maybe have not had more extensive training in lymphatic drainage are familiar with. The, those deeper lymphatics, the, muscle.

Cathy Ryan: Contraction helping to move fluid [02:55:00] along. And then the lymphatic system also has an intrinsic pumping system stimulated by smooth muscle contraction. So very much like our blood vascular system, there's smooth muscles that line the internal lining of some of the lymphatic vessels. And they track to help move fluid along as well.

Cathy Ryan: The IT is believed that the extrinsic pump is the primary driver of lymph transport in the deeper system, and the intrinsic pump is the primary driver of lymph transport in the superficial system, approximately two stairs of lymphatic flow is via the intrinsic pumping or contraction of smooth muscles.

Cathy Ryan: Which is important for us to consider, again, because those structures are so close to the surface, and if there's the potential for massage manual therapy to have some kind of impact on. Smooth muscle. For example, the activity of smooth muscle, which is largely mediated by the autonomic nervous system.

Cathy Ryan: Then there might be the [02:56:00] potential for our hands to have influence, a positive influence over the contraction of smooth muscles that are helping to move fluid along in this vessel.

Cathy Ryan: So the prolonged the issue with lymphatic pumping is the prolonged presence of pro-inflammatory cytokines can suppress the local intrinsic pump. So certain agents can have an impact on these smooth muscles leading to a fibro vicious self perpetuating cycle. So we have prolonged concentration of inflammatory agents that suppresses the pump.

Cathy Ryan: We get stasis continued presence of agents. Fibrogenesis, more stasis, so on and so forth. So we see here how this can create this self perpetuating vicious cycle. And then the last component we'll touch on here with respect to what has an impact on flow our valves. So we do know that lymphatic valves like [02:57:00] veins have valves that help to check backflow.

Cathy Ryan: So again, thinking in terms of if we've got some situation with stasis where there's this accumulation of fluid inside the vessel that's causing the vessel to become more distended. What happens is as that vessel becomes more distended, those valves now become incapacitated. They're no longer affected.

Cathy Ryan: And just one note on lymph stasis, neuroinflammation, sensitization, and non resolving pain. Impaired stasis, not only this impact on flow and fibrogenesis and how those things relate, but as, as well, this

accumulation of inflammatory pain agents in the interstitium can result in a continuous stenosis receptor agitation.

Cathy Ryan: Which eventually can lead from acute pain to more complex pain and central sensitization. And we [02:58:00] have this non resolving pain that seems to be resistant to pharmacological intervention. I'm often talking about, I really think that the lymphatic drainage world needs to be talking more about the relationship between.

Cathy Ryan: Lymphatic drainage and pain management. I know people are aware of this, but I don't hear it talked about nearly enough that this is such a powerful tool for pain management, both in the acute sense and as well as more complex pain as well from the potential of tempering or preventing that from happening.

[02:58:34] Manual Therapy for Stasis

Cathy Ryan: So all that given. So if we know that our situations are stasis and fibrosis, so with stasis or flow from massage manual therapy perspective, then our work is directed to address, to help assist flow or reestablish. Flow and from the perspective of fibrosis, our work then becomes focused on tempering or preventing this from [02:59:00] happening in the first place, or facilitating productive changes once problematic mature scars have formed.

Cathy Ryan: So stasis flow assists. So preserve, improve regional tissue patency, as well as how that might impact the patency of the vessel itself. So if we've got a tube running through very dense, compressed tissue, that also can have an impact on the patency of the internal. So like stepping on a hose, squishing the hose down a bit get the foot off the hose, the water flows through the hose a little bit easier.

Cathy Ryan: We know that. Certain types of lymphatic techniques can influence the pumps, both intrinsic and extrinsic, manually pushing or squeezing or squishing fluid from one space to another space. So a lot of my practice is post-surgical massage therapy. Where essentially I'm working with people who have a healthy, intact lymphatic system that might be temporarily overwhelmed or interrupted as a result of [03:00:00] some kind of surgical procedure, let's say a.

Cathy Ryan: Total knee replacement, for example. So I might see this high volume of fluid in the area where those structures have been impacted or compromised as a result of the surgical procedure. So we can use our hands to

redirect, move that fluid to an area perhaps up above the knee where those lymphatic structures are still intact to help with good resolution of the stasis.

Cathy Ryan: And then stasis and flow as we as I mentioned, stasis, when stasis can potentiate fibrosis. So this is one of the ways that we can, by doing lymphatic work to temper, prevent the situation from happening or, lessen perhaps the impact of that. And then as far as reestablish goes is our work capable of.

Cathy Ryan: Either preserving or reestablishing interstitial flow channels, by virtue of, some kind of influence over the patency in this [03:01:00] interstitial tissue and how that might impact the angiogenesis.

Cathy Ryan: So the various methods that we use for lymphatic flow perhaps in the early stages, in the first couple of weeks or the first few weeks after some kind of trauma to tissue, whether it be radiotherapy or surgery. Variety of techniques that we can use to help rectify the situation or support during this process of the wound healing stages.

Cathy Ryan: So that just some of the approaches that we can use, the type of techniques we can use, fluid moving, nervous system, calling techniques, and then non agitating, non-no accepting massage manual therapy and movement approaches to help with resolving some of these issues. So just a, a little bit of the research to support.

Cathy Ryan: Yes. Lymphatic smooth muscle cells are mechanical sensitive, meaning that, these cells react or respond to mechanical pressure. So potential of how our work [03:02:00] works. And the evidence supported outcomes. So this brings us to our results here. The mechanisms by which various methods facilitate lymph that flow involve interrelated sponsors within multiple systems.

Cathy Ryan: That's. That's one of the complex things about researching our work is that so much is happening in concert at any given time. So not only are these mechanistic things that we look at that are important, but at the same time, on a therapeutic alliance level, we're also having some kind of interaction with our patient that also is contributing to the outcomes that we're achieving.

Cathy Ryan: It's complex. We're complex. Our work is complex.

[03:02:41] Preventing Early Fibrosis

Cathy Ryan: So with respect to fibrosis in the early stages of. Wound healing. Our work is directed to temper or prevent it from happening in the first place because certainly an ounce of prevention is worth a pound of cure. Once established fibrosis is a more complex situation to deal with.

Cathy Ryan: So anytime we can temper or prevent [03:03:00] that's definitely an advantage for the patient. So in order to temper or prevent, we need to know who the influences are. So in the. In preparations for while we were writing a book, Nancy and I, doing the deep dive into wound healing and scarf formation, essentially kept coming back to two really predominant or drivers of fibrosis.

Cathy Ryan: One is the excessive prolonged inflammatory stage and the other is anomalous tissue tension in around the wound area. And each of these things can potentially. Each other. So using our hands to, to focus on these two things in the early stages, whether after be radiotherapy or after some kind of surgical procedure can be really beneficial for the patient.

Cathy Ryan: The other. Some other factors, important factors to consider with respect to tempering or preventing fibrogenesis are neuros sensitization or hyper vigilance mobilization and the patient's psychological state. So a again, there our work is more than, one [03:04:00] agent, one outcome, a lot happening in concert.

Cathy Ryan: This brings us to aspects of inflammation intention that are amenable to massage manual therapy. So these are all the things that we potentially can influence with our hands. So the volume of fluid, stasis flow, concentration of agents, or di dilute the soup is we like to say smooth muscle activity.

Cathy Ryan: Fibroblasts, myofibroblasts and immune cells as well. Patient stress or anxiety level and as well as the, just the the stress of the person's nervous system as well.

[03:04:37]

Cathy Ryan: Again, just to bring some research in every once in a while to talk a little bit about, some of what supports are pulled.

[03:04:45] Gentle Loading Evidence

Cathy Ryan: My approach to post-surgical and scar tissue work is and this one here from Fandel shows that when tissue is in a more stiffened state. Due to pathological [03:05:00] accumulation of pro fibrotic agents and persistent inflammation fibroblasts, which are driving much of those processes are more sensitive to mechanical force, so the loading or force among appropriate for normal healthy tissue.

Cathy Ryan: Can actually drive this process further. So newly formed scars or inflamed tissue will respond better to softer approaches, lower loading than typically used with healthy non-inflamed tissue. So those of you who have I've had the great privilege to be in the company of when I'm teaching the scar tissue and post-surgical massage therapy course, know that, I'm much on the lighter side or softer side with these of my hands.

Cathy Ryan: So oftentimes I'm working anywhere from a one, two, or three on the Walton Pressure Scale. That's the norm for me. And even with more mature scar as well. I certainly don't come from the prosec. Perspective of breaking up scar tissue because collagen is really hardy, dense [03:06:00] stuff and not physiologically possible for us to break it.

Cathy Ryan: And why would we want to rip stuff apart? That's what started the problem in the first place and it didn't go well. So from my perspective, I. Gravitate away from provocation type techniques, like friction, especially working in the context of oncology as well, because for example, with mastectomy there, there is more of a risk for lymphedema if we're more, assertive or aggressive with the tissue.

Cathy Ryan: So a Walton one to three. Here's another one from Huang and owa looking at the impact, things that might impact keloids. So OWA is one of the world renowned researchers on keloid scars. Taking a look at things that are positive and things that might be potentially problematic.

Cathy Ryan: So in the green you see the positive. There should be one more cog in there that says massage manual therapy. In my humble opinion in the [03:07:00] pink things that we need to be careful about. And they put exercise in the be careful side of things, which is, interesting. 'cause oftentimes, after some kind of surgical procedure, there's get moving, get exercising, right away.

Cathy Ryan: So this is one study that was quoted by Huang Nawa. This was an Olympic athlete who had an achilles tendon rupture. And essentially this person was healing quite well. There were no anomalies along the incision line. And

that about a month out. Or sorry. But a couple months out this person started a very intense training program.

Cathy Ryan: So Olympic athlete, you can imagine you probably went back at pretty Hardy and developed a keloid scar as a result of just too much aggressive pulling tensioning on the tissue a little too soon before it was ready. And the body responded by an overexpression or hyper proliferation of collagen.[03:08:00]

Cathy Ryan: So massage immunotherapy methods that can have some kind of influence on inflammation and tension. So again, we're gonna see a repeat of the type of techniques that we can use to help manage these situations. Fluid moving techniques, non agitating, gentle stretch, tension and mobilization techniques, N system, calming techniques, non agitating movement approaches.

Cathy Ryan: Another piece of research with respect to how we can influence orientation, so causing orientation after injury from Kohler. So movement, manual therapy, influencing fibroblasts activity influences, remodeling resulting in functionally oriented collagen. Sorry, my my graphic got messed up there where we've got.

Cathy Ryan: Floating letters. So again, evidence supported outcomes through a bunch of research there that helps to support, Kathy putting her money where her mouth is thing. [03:09:00] And again, various methods facilitate inflammatory attention changes involved interrelated responses within multiple systems.

Cathy Ryan: Were complex.

[03:09:11] Changing Mature Fibrosis

Cathy Ryan: So we talked a little bit about how to temporary prevent fibrosis. Now we're moving on to facilitating change. So someone has come to see us, months, a couple years after say, radiotherapy or some kind of, maybe thyroidectomy or some kind of head and neck surgery related to cancer care.

Cathy Ryan: Looking at a lot of the literature historically, fibrotic tissue is considered, was considered to be an inactive SCA scaffold. And my thing is it's not necrotic, it's not dead tissue, it's altered. So fibrosis is not a static state. There's, it's still living tissue, there's still ongoing cellular turnover and therefore, potentially this tissue is amenable to intervention with the potential for change And.

Cathy Ryan: I think from, in my humble [03:10:00] opinion, if we really want to suss out how manual therapy can be effective with respect to or can. Manual therapy have some kind of impact on, let's say, mature scaring, fibrosis that has already established a year or two years later. I really think the research needs to be done over many months.

Cathy Ryan: I think the average shelf life of collagen in our body is 18 months, so it takes a long time for a body to continually turn over these cells. So I think. Really getting a clear sense of how effective our work can be. I think research needs to unfold over that kind of timeframe in my humble opinion.

Cathy Ryan: So any researchers that are out there, then I see my name up there that I recognize. Just a thought. From my perspective, if nothing changes. So if we've got a chunk of fibrotic tissue somewhere in the body and it's [03:11:00] dense and there's patency issue there that's impacting blood flow, lymphatic flow nerve conduction, that tissue is not going to, be equipped with what it needs, perhaps to more for change into something that's more functional, less problematic over time. So some of the aspects of fibrosis that are amenable to massage manual therapy, given the current research that we have is, how we can impact. Certain collagen fiber changes like hydration, orientation, pathological, cross lengths, crimp not only with our hands but with certain movement approaches as well.

Cathy Ryan: Certainly how our hands might be, had some kind of positive influence over Restasis malu concentrations, oxygen, nutrients, getting to the tissue that it needs to be in a healthier state. And as well just the psychological impact, from the patient's perspective of how our work can help to, support them as well. I often say [03:12:00] that as far as the therapeutic alliance goes, our interaction with our patient, there any, at any given moment in the context of my practice, 80% of the productive outcome could be just in the interaction, the way that I'm interacting with the patient.

Cathy Ryan: For example, I live in a very northern remote community. It's not unusual for people in our community to have to travel down to Vancouver, which is an hour and a half flight or four hours to Prince George. Driving time in order to have some kind of surgery, including oncology related surgeries come back to the community.

Cathy Ryan: It may be, two or three weeks before they're having a consult with their physician or their surgeon. I might be the first line of defense or the first person that they might interact with after their procedure. So it, it's not unusual

for people to come into my practice and, they're looking at their incision going, okay, that looks, does not look like [03:13:00] something I want to see.

Cathy Ryan: And because of my years of experience as a practitioner, I can say to 'em just for what it's worth, that's what I would expect to see at one week out. And they're like, oh, okay, then I shouldn't be worried about that. No, that looks pretty typical to what I would expect to see at this kind of, place in your process so that can, go a long way to relieving some stress that they might be experiencing.

Cathy Ryan: As well. Other things that are amenable to massage monotherapy is the potential gliding or lack thereof of connected tissue.

Cathy Ryan: Again, just to bring some, research in into it here. So this is related to burn scars. There seems to be, I think when we're looking at scarring, burn scars seem to be one of the more robustly researched areas with respect to the effect of manual therapy on burn scars. So whether we're talking burn from some kind.

Cathy Ryan: Chemical [03:14:00] thermal exposure or talking, scald in water, whatever the case may be, similar with radiation induced fibrosis. This is essentially a burn scar. So in this particular study they said there was no strong clinical evidence that shows massage leads to faster maturation of burn bos.

Cathy Ryan: However, it does appear that massage therapy is psychologically beneficial and fosters a sensory wellbeing for the patient. Promotes greater mobility, helps control distressing symptoms of burn, scar, pruritus, or itching or other sensory types of things that might happen. Eases tight muscles in the functional contractures, which may develop in discovery related contractures.

Cathy Ryan: So in short. May not help speed up the process, but has a positive impact on the psychological state of the patient, their quality of life their pain experience pruritus, pliability and mobility. I'm good with that and as well the benefits balance of benefits and [03:15:00] harms. In this particular study, there were no report of any harm ensuing from massage therapy, and that's pretty good.

Cathy Ryan: So massage methods to address fibrosis. So again, fluid moving techniques so you know that, development of fibrosis or perpetuate that, a non resolution type of situation. Stretching, tensioning techniques, again, nervous system, calming techniques and various movement approaches as well.

Cathy Ryan: And the one thing I will say about with more established or mature fibrosis again, coming from someone who's, self-proclaimed fashion nerd. These are folks that I think that might benefit from more of that global approach or myokinetic chain or myofascia meridian or functional lines approach where an issue at one location might create some kind of adaptation or compensation someplace else.

Cathy Ryan: So those types of more global approaches are often [03:16:00] helpful for these patients as well. And again, our evidence supported outcomes. So much research there to help support how our work works. And with respect to more mature scars, really looking at facilitating changes with respect to the fiber and the fluid environment inside the collagen fiber, as well as the fluid environment around the collagen fiber that might have a impact on the capacity for that collagen fiber to slide or glide with respect to its neighbors.

Cathy Ryan: Times for changes. So collagen fiber changes. Some of these changes take, as I was saying earlier, some of these changes take a long time. Quality and orientation changes. This is something that can take. Months to see some kind of change over time, whereas fluid environment, these are the kind of changes that we might see more quickly.

Cathy Ryan: These are the things that, we're working with someone and engaging the tissue and at first it. The tissue feels very firm and dense. And then after a bit of time you can [03:17:00] feel that tissue becomes more soft and more pliable. And we might see implications, or indications that there's some kind of change in microcirculation as well, like blood flow less congestion and tissue, or better lymphatic.

[03:17:16] Ultrasound Proof of Change

Cathy Ryan: Okay, this next session I like to call, look at that. So again, bring some of the research into it. This from Dr. Pol, I got very excited when I saw this presented at, I don't know if it was at the International Massage Therapy Research Conference or the Fascia Congress. It was one of them. Anyway, one of those important manual therapy conferences that we should all attend.

Cathy Ryan: Got very excited when I saw this. So pole in this particular study, this is at the skin level, so using high definition, real time ultrasound to visualize that layer of tissue. Found areas in skin that from Pole's palpation, who's a physician, trained as massage therapist. They do that in Europe. From Poles palpation found [03:18:00] these areas that, as much of us know, feel more dense and less pliable in not as much give.

Cathy Ryan: And then Pole found another area adjacent that did not have that same feel to it. So this area of more dense, less. Pliable was what she described as the afflicted area. So the up pole did was she visualized the afflicted area, non afflicted area, using high definition ultrasound, and then applied what she describes as a modified skin rolling technique, which is very similar to the way that I use my hands with respect to established fibrosis.

Cathy Ryan: I'm, I, and as well in early stages wound came too to help with patency, but I do a lot of. Lifting of tissue rather than compressing into tissue. Lots of reasons for that and we can discuss that another time or come and see me at one of the Hewell events. I'm there but. Pulled at a lift and what she described as [03:19:00] micro shearing.

Cathy Ryan: So this micro shearing of this tissue between her fingertips. And then she did that in the non afflict afflicted area as well. We visualized and in the non afflicted area or the healthy area, there was no change, everything looked the same, but in the inflict, the inflicted area, what she saw were these strands of collagen changed in their diameter.

Cathy Ryan: So on the left you can see a more, more dense compressed, that's before treatment. And then as we move to the right there on your screen, you can see that the fiber actually changed its diameter size. So we know that. You can't lay down cells that fast to grow a bigger fiber. So what perhaps we can somewhat surmise is physiologically plausible, is that collagen fiber became more hydrated.

Cathy Ryan: And that is what constituted that more soft, pliable, I refer to this as the [03:20:00] sun dried tomato effect. Take a sun dried tomato that's like really hard and stiff. And you try to bend it, it doesn't bend. And you try to slide through your fingers and it doesn't slide, and you take that sun dried tomato and you plop it in a glass of hot water.

Cathy Ryan: Let it sit there for a few minutes. You take it out. Now that sun dried tomato has a bit of give. You can twist it, you can bend it. It slides between your fingertips. So the sun dried tomato.

Cathy Ryan: This one Sharon Wheeler. Very well known role for educator. Sharon's work is called scar work. Again using high definition real time ultrasound. I believe this was a C-section scar. So visualize the area from the skin down to the superficial fascia before treatment. And you can see the red arrows that denote.

Cathy Ryan: The space between the skin and superficial fascia. And then on the right after some work from Sharon, some scar work from Sharon, you can see that there's a, this change in what Wayer describes the skin to [03:21:00] scar difference. So when I'm talking about patency, this is what I'm talking about. So there's more openness there that layer is less dense, less compressed.

Cathy Ryan: So again, if we've got, structures traveling through between the skin and the underlying tissue, which there are a lot of them. There's the potential for some kind of patency impact there. This one from Alistair McLaughlin. Alistair does a myofascial scar release type of work. Again, using high definition, real time ultrasound.

Cathy Ryan: Don't, I wish I had one. And again, showing pre and post treatment. So in the Alistair was going for something similar to what? You know the image of what we saw, what Sharon's work, where we see this change in the density compressed of the tissue. What he wasn't expecting and was really surprised to see was a change in vascularity.

Cathy Ryan: So on the left we see [03:22:00] this area of pretreatment. You can see a little bit of red there, where there's obviously some. Blood supply going. Otherwise we would no longer be living tissue. But after the treatment, we see much more blood supply. So this is what I mean by with fibrotic tissue. If nothing changes.

Cathy Ryan: But if our work has the capacity to improve flow through that tissue from a blood lymphatic perspective as well as just neural function, then there's the potential for this tissue to morph for change over time into something that is less problematic.

[03:22:30] STAR Summary and Takeaways

[03:22:30] STAR Summary and Close

Cathy Ryan: So in summary. Using the star evidence-informed approach.

Cathy Ryan: And this is the format that I use when I teach the post-surgical massage therapy and scar tissue class. So our situation, what is the issue task? What is it that needs to change action? How do we use our hands to facilitate those changes? And the results is the evidence-informed outcomes as best as we can explain using the current science.

Cathy Ryan: So summary, our situation is stasis [03:23:00] fibrosis, that's our situations. So summary for stasis. Our tasks then from a stasis perspective, is to improve patency, to support better pump action. And as well help take some of the demand off the vessels so that they can return to their more say appropriate, circumference so that the valves once again are working more properly.

Cathy Ryan: Summary fibrosis. Our tasks are to either temporal, prevent, or facilitate meaningful change after fibrosis has been established. Our actions in the early stages of wound healing, scar formation, so how we use our hands, fluid moving techniques, nervous system calling techniques, non-no C, non re-injury, massage, mant therapy and movement.

Cathy Ryan: So remember from that study from og if we're too aggressive of the tissue early on, that actually can potentiate fibrosis rather than. Temper, prevent it. And then when we get into mature, problematic scars pretty much the same thing. The only thing I think different from [03:24:00] my perspective with respect to more mature scars is the consideration around compensation and adaptations.

Cathy Ryan: Our results did, I assume. Temper the amplified, fluctuate the flow, unstick the step, clean the pledge, organize the chaos, and fluctuate the fluid. That's what we do. And again, I would be remiss if I didn't, again, talk about therapeutic alliance, noting that we are not just a pair of hands and we're not just treating scars, we're treating people with scars.

Cathy Ryan: So whether that scarring is from radiation induced fibrosis or scars from oncology related surgeries in the head and neck region there's a person there and it's important to be ever mindful and be present with that person.

[03:24:50] Resources and Closing

Cathy Ryan: So the resources the traumatic scar tissue management book that I co-authored with Nancy Teeny Smith.

Cathy Ryan: Then as well chapter contributions in fascia function and medical [03:25:00] applications and oncology Massage and Integrative Approach to Cancer Care by Janet Penney and Rebecca Sturgeon. If you're looking for me, you can find me at Heal in the US I generally teach classes sponsored by Heal Well, and if you're looking for me outside of the us you can email me directly at c ryan rmt@gmail.com.

Cathy Ryan: Thank you so much for being curious folk and folks. I really appreciate your time and thank you again to S four OM for inviting me back. I really do appreciate it.

[03:25:31] EST Presence in the Body: The role of interoceptive awareness for health and wellbeing with Cynthia Price

[03:25:31] Welcome and Speaker Intro

Cynthia J Price: Hello everybody. Thank you so much for being here. My name is Cynthia Price and I am going to do a presentation on interception, which is for those of you who don't know, and I'll be telling you more about it.

Cynthia J Price: It's

Cynthia J Price: the awareness, interceptive awareness. There's awareness of sensations inside our bodies.

Cynthia J Price: And I have been a research professor at the University of Washington in Seattle for the last [03:26:00] 25 years doing research on an approach I'm going to tell you about. And prior to that, I was in private practice as a massage therapist and somatic psychotherapist. So my work has involved touch through the out the last.

Cynthia J Price: However long I've been doing this work, 40 some years. And I train massage therapists to work on my research studies and now have a nonprofit, well, I've actually had it for a while.

Cynthia J Price: That is called the Center for Mindful Body Awareness, where we offer trainings to therapists of various, in various disciplines to learn the approach that you're gonna hear a little about today.

Cynthia J Price: So let me share screen, the title of my talk is Presence in the Body, the Role of Interceptive Awareness for Health and Wellbeing. So you can see if you wanna get in touch with me, my email and the nonprofit center [03:27:00] where we do teaching.

[03:27:04] Interoception Basics

Cynthia J Price: So, so I'm gonna first talk about some constructs so we have some words in common. So, interception is this process by which the nervous system senses interprets and integrate signals that come from inside the body and provides a moment by moment mapping of our body's internal landscape conscious and unconscious.

Cynthia J Price: Most of it's actually unconscious, so the parts that we can be aware of, the aspects of our inner system signals that we can be aware of, we call interceptive. The capacity to do that is called interceptive

Cynthia J Price: interceptive

Cynthia J Price: awareness, and it's understood as both bottom up perception of body signals and top down cognitive appraisal of those signals helping us to guide responses for regulation and emotional [03:28:00] state.

Cynthia J Price: So regulation of our, our body in ways that we need to survive. And that's what we mean by staying regulated from a homeostatic perspective. For example, when I'm cold, I get shivers and I notice those and I kn know I need to put on warmer clothes. When I'm hungry, I get signals telling me I'm hungry, so I know I need to eat.

Cynthia J Price: When I'm tired, I get information from inserted my body that helps me realize how tired I am, right? Like we need those things to survive. We need to sleep and drink and stay warm enough and so on and so forth. But also our emotional wellbeing. We get signals to help us know how we're feeling. So with interceptive awareness, we're paying attention to all of these things.

Cynthia J Price: Bud Craig, who is the first reference down here, was anatomist who traced to the sensory pathways to the areas of the brain where those signals go. And that's how we know that these signals are really there [03:29:00] for regulation, for keeping our body in balance because they go to the parts of the brain that are specifically for that purpose.

Cynthia J Price: So

[03:29:11] Mindfulness Connection

Cynthia J Price: when we're learning interceptive awareness, how to bring attention into the inside of our bodies, which is what I do, and teach and

research we're calling on mindfulness skills to do that. So there's a really big overlap between paying attention with. To interceptive awareness internally and developing that skill therapeutically and having mindfulness skills.

Cynthia J Price: So when we're paying attention to our body, we're going into present moment awareness, which is for many the sort of quintessential definition of mindfulness. It's present and of awareness with these other qualities that are considered really important for mindfulness,

Cynthia J Price: openness,

Cynthia J Price: curiosity, non-judgment, and self-compassion, [03:30:00] as well as learning the capacity for sustained attention to what we notice inside.

[03:30:06] Research and Clinical Relevance

Cynthia J Price: That's also a mindfulness skill and absolutely integral to learning interceptive awareness skills for, from a, for, for really helping ourselves know how, how we're So I wanna just touch on neurocognitive models and research in the last 15 or so years. Maybe a little more. There's been quite a bit of attention to interception, inci in the scientific realm, especially related to mindfulness initially because neuroscientists got involved in this question, how does mindfulness work?

Cynthia J Price: What is happening that helps people learn these skills or explains why mindfulness is helpful? Right? And through [03:31:00] neurosciences, neuroscientist research and models for understanding this, the whole concept of interception came into clinical care in a way it never had before. So we now know these areas of the brain that support interception and influence self-appraisal and emotion and effective symptoms.

Cynthia J Price: But cross-sectional studies, those are studies that are just, you're not

Cynthia J Price: teaching

Cynthia J Price: anyone anything. You're just bringing people together. A large group and looking at whether there are differences, for example, between those who have mental health symptoms or physical pain and those who do not to see whether there's differences in where their brain lights up when you do sensory processing.

Cynthia J Price: And what they've seen

Cynthia J Price: is

Cynthia J Price: that people who have mental health disorders, pi, people who have physical health conditions like chronic pain, for example, compared to healthy controls, have difficulty processing their sensory information. [03:32:00] So this is pretty much known at this point, and it suggests that to help people learn how to do this in order to support their regulation.

Cynthia J Price: Chronic stress also appears to reduce access to interceptive signals. So when we talk about cancer well first let me just show you these, these are slides about the interceptive network getting triggered with interceptive is worked by Norman Farb who's done a lot of work in the mindfulness realm.

[03:32:35] Cancer and Massage Context

Cynthia J Price: And when we talk about cancer, there is more and more literature that is really pointing to the role of interceptive awareness as being really important in cancer that people living with cancer also have difficulty attending to their internal signals and processing sensory information and their bodily And I think that [03:33:00] makes sense. I think these are across the board when people are living with distress, mental health, distress, physical distress. Though coping responses, especially when it's long are to shut down some of that attending to internal in, in, in information from inside as a way of, of kind going on with life and it makes sense, but there's a point at which it's not that helpful anymore.

Cynthia J Price: So many of these articles in this most recent one is an example, are really suggesting how important interceptive awareness can be for a gen as a critical skill in cancer treatment and recovery to address people's mood, their resilience, and their regulation. So, this particular team of Reese Truvado and Anton have been publishing quite for [03:34:00] quite some years and saying very similar things across those years.

Cynthia J Price: You can, you can see that this one was came out, this particular publication. So the relevance to massage therapy with head and neck cancer, 'cause that's what you are all here for. I wanna talk about this for a minute and then we'll come back to this point again at the end. But I was talking with Holly McMillan, who gave the presentation earlier today in anticipation of

this presentation, and and she of course has lots of experience and expertise with.

Cynthia J Price: Massage for head and neck cancer, and she was telling me how much more is needed. Not only for massage therapists to know and offer in cancer treatment, but in cancer treatment in in general to help patients address their symptoms of physical and emotional distress. And some examples, which I'm sure many of you're familiar with are the physical discomfort of radiation.

Cynthia J Price: The [03:35:00] emotional and physical discomfort related to changes in facial features, changes in the ways people can express intimacy, the numbness that people can have in their lips, their inability to kiss the eating and social situations. That can be really challenging if someone's drooling or having other eating issues.

Cynthia J Price: Depression, the suicide rate being high due to long-term sequela of symptoms for patients So you can see here we're, we're having examples that are about both mental health challenges, physical health challenges a lot around acceptance of things that have happened that are long-term consequences that someone has to live And these all are relevant for thinking about how we could use awareness of internal body cues and how we respond to those cues or what they bring [03:36:00] up for us internally when we pay attention help people process those responses and find new ways of being in the world. And that is what my work is about.

[03:36:12] Benefits for Clients

Cynthia J Price: So what do clients get from improved interceptive awareness? It develops awareness of their inner sensory experience. It helps them link between physical and emotional symptoms. It facilitates acceptance and self-compassion. It promotes somatic reappraisal, new understandings of provides people with new care tools for self-care, which can be really empowering, helping people have new ways to regulate and a sense of their own agency to do that, which is just stress management.

Cynthia J Price: And another set of terms promotes behavior change, new ways of being in the world, and clients learn to experience their body as a resource for under them understanding themselves, engaging in new behaviors. So, [03:37:00] sort of giving you the end before the the middle here, but I just wanna have you understand why this work might be relevant to you.

Cynthia J Price: So our overall goal is to help clients have the, a better capacity for regulation and using interceptive skills to do that. So we're always working on how can we help someone stay in better balance or come into quickly between the parasympathetic and sympathetic nervous system. So

[03:37:29] MABT Method Overview

Cynthia J Price: the work that I do to help people learn these skills is called mindful awareness and body oriented therapy.

Cynthia J Price: And I developed this approach when I was working a couple decades ago in clinical practice mostly working with people in recovery from trauma, from trauma, interpersonal trauma. So they were pretty disconnected from their bodies and

Cynthia J Price: helping

Cynthia J Price: folks gain a new set of skills that needed in their recovery.

Cynthia J Price: And since then with research. I've [03:38:00] continued to work with trauma recovery, but also a lot with folks who have been or who are in substance use disorder treatment, most of whom who have trauma

Cynthia J Price: and

Cynthia J Price: many of whom have chronic pain. So these have been sort of the primary three areas or populations I've worked with is trauma substance use disorder, recovery and chronic pain.

Cynthia J Price: But this work is really helpful across the board for people who are struggling and people who are not, because it's really, we can all have more capacity to pay attention internally for our own wellbeing. So this work, MABT, I call it mindfulness, mindful Awareness and body oriented therapy, teaches interceptive awareness skills that uses touch psychoeducation and mindfulness.

Cynthia J Price: And the explanatory model is that through learning these [03:39:00] skills, people are more, have more capacity for emotional regulation and then improved wellbeing. So it's delivered individually. It's incremental in its approach, and I'll talk about that in a minute. I've been doing 25 years of

research. So it's evidence-based, it's a trauma-informed approach, and it involves home practice.

Cynthia J Price: Our ultimate goal is for people to learn these skills, integrate them into their life, and have a new set for their own self-care. So the article that's referenced here which is available on my website there's a tab for research and all of the MABT research is linked there, so you can find it and other things if you want, describes this approach in in detail.

[03:39:46] Eight Week Skill Building

Cynthia J Price: So these are the basic aspects of learning interceptive awareness with this approach, learning to be aware and identify sensations

Cynthia J Price: and

Cynthia J Price: be able to use language to identify to be [03:40:00] able to bring attention, learn to bring attention from outside the body, to inside the body. How do you do that? And we work on that.

Cynthia J Price: And then learning to sustain attention in the inner body for a significant period of time and that we try to grow. And then really working with what are we finding that has meaning to And so reflecting on what one's experiences is the somatic reappraisal component,

Cynthia J Price: and

Cynthia J Price: then the take home practice.

Cynthia J Price: So the main components that are important for learning, so when I've been doing research, you have to develop a protocol. And so I've been doing research that involves an eight week protocol to touch on these points. And again, these are the same key things we were talking about, but every session starts with an intake for check-in, conceptual [03:41:00] building trust in the relationship.

Cynthia J Price: And then these are the three stages for se sequential learning to promote interceptive awareness. The first two sessions are focused on body literacy, which is developing that awareness, and we work more on the external body. the next two sessions are more focused on how do you bring your awareness inside the body that's accessing.

Cynthia J Price: Interceptive awareness. And then the last four sessions are learning mindful body awareness practice or sustaining attention in specific regions of the body. And then we review what we've done, what was the highlights of someone's experience for the somatic appraisal process, and to help guide what the take home practice will be at the end of every So when we teach, we teach this process, knowing that as clinicians, you're not going to be doing an eight week protocol necessarily, but so you can take the pieces [03:42:00] of this that you can bring into your practice with folks in a way that makes sense to you and to them.

[03:42:10] Guided Body Awareness Demo

Cynthia J Price: So I'm going to take a few minutes with you and share with you some of these learning strategies I was just talking about more experientially so you have a better sense of what I'm talking about.

Cynthia J Price: And then we'll come back to the slides and I'll tell you some more that's based on, on some of the research that we've done. So I'm gonna stop sharing for a minute so you can see me talk about a couple things from this intervention and just try them yourself and just an invitation to do that.

Cynthia J Price: So the first thing we're gonna work on is the beginning of this intervention, which, or this approach, which is again, identifying and articulating in language what we're noticing how we would [03:43:00] describe Lot of people for whom this kind of approach is new. Their language is somewhat limited, like the words just don't come.

Cynthia J Price: You know, when you say, what are you noticing, someone will often say, oh, it just feels so good. Right? Versus a sensory word to describe what they feel. So that's what we're working on first is developing language and comfort. Just expressing that and saying out, loud it out loud, there is an enormous amount of verbal back and forth in this approach where the person is simply telling you what they're noticing in the moment.

Cynthia J Price: And so you can sort of track with them what's happening. And that's really the point. And a lot of body workers go, oh, but that's outside the scope of our practice. I'm like, no, it's not. We're not doing psychotherapy. We're we're, we're working on focusing on sensory awareness, what they notice in their bodies in the [03:44:00] moment.

Cynthia J Price: And that is really important re

Cynthia J Price: to

Cynthia J Price: remember because that even though there's a lot of verbal interaction, that's the focus of the verbal interaction, the majority of it. So for those of you who wanna join me in this, this is gonna be very, very familiar to you as body workers. But what we do first is, for example, if you put your hand on your shoulder, where we all typically have.

Cynthia J Price: can find some tightness oftentimes. And just kind of feel around, just kind of give yourself a little massage. You might kind of go into the upper back around your shoulder blade, top of your shoulder blade, if that area is reachable. Or you can stay more right here at the very top of your, of your shoulder anyway, as you're, as you're feeling around, find a place where you're like, oh, there's a lot of sensation there.

Cynthia J Price: I'm just gonna hold that spot. And then really press quite

Cynthia J Price: [03:45:00] strongly and just hold that spot and ask yourself, if you were to close your eyes or not, just ask yourself, if I were to use words to describe this sensation underneath what

Cynthia J Price: would those words be? And that's what we do when we do that for the first two sessions all over the body.

Cynthia J Price: So in my case right now, as I hold this spot, for example, first I noticed. The, the, the tenderness, it was sort of an achy tenderness underneath what felt like a hard, hard area of muscle tense. Area of And then as I hold that spot, what happens? And what I notice is that achiness dissipates, and then I mostly just notice the pressure.

Cynthia J Price: So for yourself, just take a moment. What words would you use to describe what you And then go to the other side and see if [03:46:00] there's another spot that you just hold. is it the same or is it Is there, are there other words? Is there a different sensation you notice your own then what happens as you hold it? And how would you describe So, as I said, this work we do all over the body is very, easy to integrate into massage. 'cause you're just doing a massage and then you just pause someplace and you ask this simple question, how would you describe what, you notice my pressure?

Cynthia J Price: And when someone says, oh, it just feels great, you know, then that's wonderful. Can you tell me the words of how you would know you would describe the sensation in your tissue? Right? you're just try and help them

orient towards what they're noticing level and how [03:47:00] they would put So with this work, people are becoming more aware of. All the things they're noticing, not spacing out in a massage, you're asking them to stay with you. And then they're practicing that, that language development. And when people have a really hard time with finding a word, we often kind say, well, I'll just throw some out.

Cynthia J Price: Tell me if any of these fit for you. That kind of, that kind of thing. All right. So that's what we do in stage one, and that's the body literacy that we're developing, body And it's absolutely critical as we move along in this approach to work on developing interceptive awareness skills.

Cynthia J Price: People need these, capacity to find words to describe how they feel and the comfort of sharing it out loud in this session, because we only do that more more and more. So we're really priming [03:48:00] people for what comes So we're gonna skip the stage two process, which is kind moving from outside the body to inside the body.

Cynthia J Price: And I'm gonna invite you to kind go on a little mini meditation inside your body with me. If you like. And if you don't want to, that's fine. We'll just take a few minutes. But I invite you to put your hand very firmly, the full, your full hand, your fingers

Cynthia J Price: very firmly

Cynthia J Price: on your chest. And if this place, and we're gonna be going, traveling down inside, into the inside of our chest, if you would prefer, if this doesn't you'd wanna go, you could put your hand again on your shoulder and focus on bringing your attention into this space inside your shoulder girdle.

Cynthia J Price: So there's different things you could down to your belly, you can do whatever you personally want. I'm going to be guiding this. For here, but you could translate in your head and [03:49:00] then go somewhere So to start with your eyes open, just sort of holding this space, just move your hand across the skin.

Cynthia J Price: Or if you're over a shirt, that's fine. And just notice what it's like. How does this place feel from the outside? How much flexibility is there in the tissue as you go back and forth or up and down, notice where there's resistance, where there's not. How does it feel emotionally to just have your hand here Just notice those things for a minute, and then I'm gonna invite you to close your eyes, and I will close my eyes too as I guide this

Cynthia J Price: to

Cynthia J Price: just close your eyes and take a minute to just feel your body in the So we wanna get really comfortable and grounded. So if you [03:50:00] could let your back, go back against the chair.

Cynthia J Price: Notice

Cynthia J Price: the feeling of your bottom on the chair. Notice feeling of your feet touching the floor. So if you could have both your feet touching the and just feel this sense of the chair holding your weight.

Cynthia J Price: And then take a couple nice, long, deep breaths, getting as comfortable and grounded as you can.

Cynthia J Price: And

Cynthia J Price: then I wanna invite you to let your thoughts get very quiet so that your focus more internal.

Cynthia J Price: What we're going to do now is see if we can [03:51:00] travel our internal awareness from our head down into the space of our chest or wherever you're holding your hand

Cynthia J Price: into the inside the middle of you in that space. So if you are moving outside of your head, see if you can allow your attention to go down out of your brain, down to the back of your really bring that internal attention. Invite it to go down through the middle of your throat.

Cynthia J Price: Invite your attention to come past your collarbone

Cynthia J Price: into

Cynthia J Price: the upper region of your torso [03:52:00] and into that space behind your hand, trying to focus on the middle of you. So between where your hand is on the front and the chair would touch the back, orienting your into the middle of see if you can allow your internal attention to rest in that space of your internal body in your upper chest.

Cynthia J Price: Notice

Cynthia J Price: if you can get there. And if you can't, that's okay. Just let yourself stay with the attention on your on your But if you can, [03:53:00] just being with yourself inside and notice how it feels to get to this internal in your chest. How does it feel to be there? How do you know you're And is there anything you notice about being in this space? Just anything at all. You may notice nothing at all, but if you do, just let your, let that information come See if you can rest in that noticing place for another

Cynthia J Price: 20

Cynthia J Price: And then [03:54:00] keeping your hand on your Allow goodbye to this place return your attention back into the room. And when you're ready, keeping your hand where it is. Open your and just notice how you're feeling now in the chair. Move your hand like you did at the beginning.

Cynthia J Price: move your hand around and notice if sense, any difference, or if it feels the same in your tissue.

Cynthia J Price: Notice breath, how do your breath feels? And then when you're ready, you can take your hand [03:55:00] away from your body. So this is just a little taste of what we do in this work. And when we're internally focused, we do got a guided process where you ask more questions for people to notice their sensory awareness in all different ways, and to speak out loud what they notice.

Cynthia J Price: So there is this skill of learning to stay inside and present with yourself and. Share without coming out of that presence. What you notice with the, with the therapist who's working with you.

Cynthia J Price: And

Cynthia J Price: so this is, this is a scale that gets developed over time and as I said, as people learn to bring their attention internally, what we're doing with this process is helping them to really have a different experience of themselves inside.

Cynthia J Price: But also what we're asking them is to notice comes [03:56:00] forward. So when people go to an area of the body where they may be discomfort, whether it's emotional or physical, or some combination, or it could be just tension, you know, like I have very tense shoulders this morning. Like if I just hung out there, what would come up for me?

Cynthia J Price: Would I be noticing.

Cynthia J Price: Thoughts

Cynthia J Price: that come up or what? Or feelings that come up, or would I just simply be noticing the physical shifts as I pay attention? What typically happens is the space internally changes. So it may start really tense or really dark, or really small or really tight,

Cynthia J Price: and

Cynthia J Price: then oftentimes it will open up and then more information comes forward.

Cynthia J Price: Sometimes again, it's in metaphor or it's just simple. Just the space feels better, right? But I think what people learn then is ways that they can know [03:57:00] how they're feeling inside that they didn't know before that are somatically based. And also sometimes information about what else is going on for them or their relationship to that place in their body changes in a positive way.

Cynthia J Price: But a lot of this work is simply about awareness. And I'm gonna go back to sharing screen. we're going to continue on and please, you if you've got some questions about what I've said so far about this experience, write them down so that they're available to you when we do the discussion portion of today, because I'm happy to answer any questions you have.

Cynthia J Price: All right. So the next I think I Let's go back. Yeah. So this is the next slide I wanna show you.

[03:57:56] Study Results and Measures

Cynthia J Price: So, as I was mentioning [03:58:00] about the different kinds of populations that I've worked with, these are just the primary populations that I've done with. Women in recovery from childhood sexual abuse,

Cynthia J Price: people living

Cynthia J Price: with HIV.

Cynthia J Price: We've looked at interceptive awareness processes, the learning processes of all involved substance use disorder as an adjunct to treatment. Chronic pain. And then I've done one neuroimaging study that I'm also going to tell you a little bit about 'cause it's pretty interesting, I think. But the key outcomes across all of these studies are an increase in interceptive awareness and also mindfulness skills are reduction in mental health distress reductions in emotion regulation.

Cynthia J Price: In one study we looked at heart rate variability, which is a physiological indicator of emotion dysregulation, and that improved quite a bit, reductions in substance use and craving and our abstinence-based studies reductions in physical symptoms and pain, and [03:59:00] continued use of the skills learned multiple times a week across studies that have long-term follow-ups, like nine and 12 months, which is a very key outcome, which I'll talk about more.

Cynthia J Price: So you can read these studies. They are all available. Most of my research, or much of it has been funded, it funded by NIH. So those studies are all accessible for free. But the links are also on my nonprofit website, on the research tab. If you go in there, there are links. So you can all of these there.

Cynthia J Price: One of the things that you'll see is we're always measuring interceptive awareness. You wanna know whether what you're teaching people is being learned. And I've been involved in developing two scales. One is the scale of body connection and one is called the Maya. The multi, the multidimensional assessment of interceptive Awareness.

Cynthia J Price: It's kind of a mouthful. Primarily because there weren't scales that really get at this [04:00:00] type of learning. So that's what. Instigated having these here for clinical researchers like myself. So the Maya has multiple scales, and just to give you a sense of what they are they have everything to do with can you use these kind of skills to regulate your attention to your body, to know how you're feeling emotionally to help yourself with not distracting and worrying when you have pain, to really listen to your body for insight and to feel that your body's safe place.

Cynthia J Price: So, this particular scale, the Maya has been used extensively around the world and it performs very well with these kinds of interventions as, you'll So I've also done a study the one and only study that really looked at brain connectivity, whether. This approach helps people learn these skills and that we, whether we can see that with neuroimaging and [04:01:00] we could, and the results really highlighted the plasticity.

Cynthia J Price: We compared people who got MABT to those who did not. And there was increased connectivity associated with also an increased Maya score suggesting that connectivity mediates greater access information. So this has been published it's a fun to read if you're interested in neuroscience at all.

Cynthia J Price: And then I wanted to show you like, what does the Maya really ask? And so this, these, these are, these are changes across time in one of my latest studies, which was with men and women on in treatment for opioid use disorder using medication. So, the green line are the group that got that. A BT intervention.

Cynthia J Price: And the, and the blue line is the control group that they were all in regular treatment on medication, but only one group got MABT. And that was between [04:02:00] this timeframe, the zero to three months. So you can see this huge leap and this particular scale, and the Maya, which had to do with emotional awareness.

Cynthia J Price: So the kinds of questions that were being asked are, you know, I can notice changes. see this thing. I can notice changes when my body, I can notice how my body changes when I'm angry. When something is wrong in my life, I can feel it in my body.

Cynthia J Price: I

Cynthia J Price: notice that my body feels peaceful, different after a peaceful experience.

Cynthia J Price: I noticed that my breathing feels free and easy when I feel comfortable. I notice how my body changes when I feel happy or joy. So this was a significant improvement compared to the control group. And what is really remarkable is that these

Cynthia J Price: responses

Cynthia J Price: to this survey were the same at six, nine and 12 months out.

Cynthia J Price: So just being able to see that these [04:03:00] things that people are learning staying with them. Okay. And then the next slide is,

Cynthia J Price: slides progressing. Yeah. The next slide is a different scale on the Maya, which is on self-regulation, where we see a very similar pattern. And these kinds of questions are when I feel overwhelmed, I can find a calm place

inside. When I bring awareness to my body, I can feel a sense of calm, I can use my breath to reduce And when I get caught up in my thoughts, I can calm my mind by focusing on my body or my breathing.

[04:03:42] Why Skills Stick Long Term

Cynthia J Price: And again, we have a big change compared to control group that is sustained across So one of the things that has always interested me is how do we understand this? [04:04:00] What are people doing that is helping these. changes, interceptive awareness stay nine and 12 months later after the study until at the end of the study. So when I first saw this, it was the first study INIH funded study that I did with women in substance disorder treatment.

Cynthia J Price: And we saw this outcome and I was like, I wanna know what's motivating their use because obviously they're using these, they're continuing to use these skills. They had said they were. And really I think that's why we're seeing this can maintained or sustain change across time is people are using the skills that they were taught.

Cynthia J Price: And so that's exactly what we were at. We did a focus group with this group of women who had completed the study to say, what's motivating your news? And this is one of the key things that we heard. This is a quote, we hear it a lot. I tried meditating over the years and I was never able to concentrate.

Cynthia J Price: But [04:05:00] that may be to me, I was able to slow my mind down and then follow what the therapist was saying, concentrating on a body part and what I was feeling and afterwards talking about it. And eventually I learned to do this by that

Cynthia J Price: I, what was why I thought this was amazing Because it taught me to meditate and now I do it every day.

Cynthia J Price: The difference was having someone lead me into learning how to do it first. So the individualized process of working one-on-one with someone of knowing how they're doing with the learning process. So one of the beauties of doing this work as a body worker is you can feel with your hands whether someone is bringing their attention to an area of the body.

Cynthia J Price: You can feel with their hands if they go out and start thinking about something, that they're no longer present And so you can work with them and say. You know, let's see if you can come back here. Or are you having

trouble staying here, or is this really challenging for you? [04:06:00] Let's see if we can find another way to help you.

Cynthia J Price: So that's very focused on how do we facilitate someone's capacity to do these skills? And that's why this is a unique intervention. It's why body workers are so, it's such a great group to learn this approach. You can learn it as a psychotherapist or another, from another discipline where you may not work with your hands, you can assess presence in another way, but there's nothing like assessing it with your hands, so it works so well.

Cynthia J Price: And so I wanted to share that with you. We always collect qualitative data.

Cynthia J Price: What

Cynthia J Price: are people say about what they're learning and what was important to them in any study? And these are, these are qualitative data from this latest study that I was telling you about with people, men and women, and medication treatment for opioid use disorder.

Cynthia J Price: But these qualitative themes are pretty much the same across every study. They learn to increase awareness of their body. So for examples, I at [04:07:00] tuned out of my body, now I check in with my whole body. Another person wrote, I'm more in tune with different parts of my body, and I can tell where I experience People gain a, the capacity to link their physical and emotional sensations in a way they often haven't before. An example, I have connections between cravings and where they exist in my body. And another I learned to connect mind, body, and regulatory skills, examples. I learned how to relax and calm myself, to put myself in a peaceful.

Cynthia J Price: Another person I can use emotions versus them using me. Another, it gave me coping skills when I'm in a stressful situation. Oops, back. Sorry about that. And last is acceptance, which I think is extraordinarily relevant to the populations you're all working with. I learned to listen to my body, not fix [04:08:00] it.

Cynthia J Price: I was trying to get rid of thing at the bottom. I learned to let, just let my feelings be, and I learned to honor my emotions even if they are So, So these are some more sort of contextualized quotes I wanted to share with you. And these again, are from this last study. So a woman who's 45 a white American said, you know, you're, this is sort of more an overview of their whole experience. You're not hiding from things inside you anymore.

Cynthia J Price: I think that had pretty much to do with my use. I was trying to cover up my feelings, trying to cover up my emotions. That was how I coped with life. And the MABT gives me the ability to focus on things in a different way. It's a very unique way to think about things that are within me and connect my body to my mind and my spiritual duality and being able to connect everything inside.[04:09:00]

Cynthia J Price: And a ma 68-year-old black American man said I learned to relax the whole me. When I'm more relaxed, I'm more at ease and ready for what is next. Once I'm more relaxed, I feel like I want to do something like get on my bike and walk, it makes me more aware. I was never in touch, really in touch with my emotions before, and the therapist showed me different ways to recognize and manage them.

Cynthia J Price: I'm more aware of what I am doing. It helps me stop and think, do I really wanna smoke my right now? Do I really wanna drink right now? Now I'm able to lie down or sit down and use MABT to

Cynthia J Price: respond to pain and discomfort instead of using medication. And lastly, a 30-year-old 31-year-old Native American woman who wrote, I learned to listen to my body and really feel my emotions and was able to recognize how they were related.

Cynthia J Price: I came in with horrible back pain problem that caused headaches and a lot of discomfort, and now I have none [04:10:00] of it. It was all from detention due to stress. I can sit and feel my emotions and sit with them and not have them control me as well as find and release negative energy in my body. I used to lash out or stay in bed on bad days I didn't wanna face.

Cynthia J Price: Now I can talk myself through them. I feel so much happier and I can truly say I love now.

[04:10:26] Therapist Observations and Insight

Cynthia J Price: Hello. pretty, pretty sweet stories of people's I'm gonna share with you some data from therapists. This is unusual data. This is the only time I've done this. It has not been published. Although I plan to, this is data that we collected.

Cynthia J Price: Therapists at the end of every session have to fill out a process evaluation form, which is one way we look at fidelity to the protocol, but also we have some other questions about what level in of engagement the client is having with the in [04:11:00] the second half of the intervention. So those last four sessions when we're focusing on sustained attention in the body, and so they record what they heard from is telling them about what they experienced.

Cynthia J Price: And so I'll tell you, I'll just give you a little taste of what we found from this. So out of 88 sessions, so some subset of a study, a prior study with women in treatment the overall, did the per, was the person able to engage in stage three

Cynthia J Price: with

Cynthia J Price: this process of somatic, I of sustained attention internally.

Cynthia J Price: And not everybody was, 10% were not across these sessions and 90% were able so that was the first thing, sort a yes or no. And then we sa asked them to indicate if they did sustain [04:12:00] attention, were they able or did they have any of these kinds of experiences? And they could indicate, the therapist could indicate.

Cynthia J Price: If any of them happened, you know, it could be one, two, or three oral four of these, a shift in sensory awareness, a link between mind and body like emotions and Somewhere,

Cynthia J Price: a metaphorical

Cynthia J Price: story or image that to them coming forward, or some sort of incent insight or profound shift in sense of self.

Cynthia J Price: Did any of these happen? And you can see that across these 88 sessions, those 90% who said yes, these happened quite frequently. So then my next question was, well, does it happen more for those people who are more able. To sustain than those people who are less able, they still can but sustain for less amount of time or less deeply.

Cynthia J Price: So we had a whole rating [04:13:00] scale around this and then I separated them into the more or the less and compared those in the red were less able to sustain. And those in the blue were more able to stain around how often did these things happen And you can see significant difference and

the more deeply one could sustain for as for a longer period of time, the more they were happening happening.

Cynthia J Price: very meaningful things occur in this So sustained attention is significant. This is a big part of what we're learning in this intervention or

Cynthia J Price: moving

Cynthia J Price: towards in this approach, is this capacity to be internal and to notice what. You notice regions of the body and what's meaningful to you about them.

Cynthia J Price: And so this, this was really important information that basically affirmed what I already was thought was the case. But it was [04:14:00] helpful to have that affirmation and I wanted to share with you. So we created this schematic. Myself and Helen Wang, we wrote a paper about facilitating adapted emotion, pro emotion processing and somatic reappraisal, in which you are welcome to read if you're interested.

Cynthia J Price: But this, whole idea that sustained attention, which can involve emotions, meaning, and memories, leads to insight with this work. So why does this work matter? It provides more self-awareness, access. Two bodily cues and trust in bodily cues. It helps with emotional regulation. It helps people manage daily stressors and health conditions.

Cynthia J Price: It supports making healthy choices, gives people a great sense of self-agency and can contribute to behavior change.

[04:14:51] Integrating Into Practice

Cynthia J Price: So going back to that slide we showed earlier of the relevance of this work for massage therapy in head and neck cancer and in [04:15:00] cancer in general. When we think about, again, these kinds of things that people can be struggling how to have a new set of might help them struggle less, might help them accept, might help them have a little less reactivity or a little less actual physical and distress.

Cynthia J Price: These are really, really important things and this work could be useful to integrate into your work with them. So what helps therapists, what supports a therapist having the skills they need teach interceptive awareness to

your clients? This is really an important thing to think about because it isn't for everyone.

Cynthia J Price: But if you are interested this, the things that are most important is your own capacity for self presence. You cannot teach something to someone else that you don't know how to do yourself. So in our courses, this is something we really focus on, [04:16:00] is how to be presence for yourself so that you can help someone learn how to do that for themselves.

Cynthia J Price: So that's one piece. And then just comfort and skill in teaching the this approach and strategies, how to be creative when time. That takes practice, the trust and. The trust and this sense of safety in the therapeutic relationship is really important. This is very intimate work and you're they notice inside.

Cynthia J Price: The capacity to individualize the learning strategies for the person to go at a pace that works for them is really, really key. And following the client's unfolding process is a really different thing for both psychotherapists and body workers. There's so often a focus on fixing, and in this work, we're really trying to stay out of that mindset and more focus on being with them [04:17:00] and what comes forward with them, and how can we help them

Cynthia J Price: simply explore

Cynthia J Price: that.

Cynthia J Price: It's a very different, a very This work is also really great for all of us who work with people who are going through a lot of in whatever capacity that is because it helps us also manage our own daily stressors, our finding, our own emotional balance helps us be in greater when we work with clients, which of course works in counteracting burnout.

[04:17:35] Summary and Next Steps

Cynthia J Price: So these skills are super for all of us to have and use in different So in summary, this worker is really about helping our clients learn more skills for attending to their internal body and can facilitate self-awareness, symptom management, and emotion regulation. It's helpful for everybody across all works of hot walks of life, but is highly relevant to care.

Cynthia J Price: And [04:18:00] your clients may also be able to better integrate and extend this kind of, these kind these tools into their daily And any experiences of inner peace that they have on the table, they can bring home with we as well as ways they can promote feelings of acceptance and joy in their life on their own.

Cynthia J Price: So people always ask when I give these talks, how can I learn more about your trainings? If you wanna take a screenshot of, This little picture here, it'll take you to where you can put in your mailing address to be. On our, our our, our mailing list, we put out a quarterly newsletter from the Center for Mindful Body awareness about MABT things about when our next trainings are and so on.

Cynthia J Price: And you're welcome to go to our website, which is down here learn more about this work in [04:19:00] general. So thank you so much for being with us today, and again, I hope to answer your questions and if you want to follow up, you're welcome to email me or,

Cynthia J Price: Call me down the road. Okay. Good luck with Bye-bye

[04:19:19] Q&A Panel

Cynthia J Price: Hello, my name is Jeanette Durant. I am dual licensed as a massage therapist and aesthetician, and part of my role at today's conference is to represent needs and perspectives from the aesthetics community. Thank you to all of the panelists for very thoughtful and thought provoking presentations.

Johnnette du Rand: Learned so much from them. It was a wonderful way to spend a day. I have worked in a spar setting for more than two decades. It's a. Area where I spend a large portion of my life. Since 2006 though, I have [04:20:00] also worked in clinical center settings and in hospital settings. I work with massage therapists and aestheticians, in particular in infusion centers.

Johnnette du Rand: And I shared the moderator q and a role with MK Brennan today, who is very well known within the massage community and highly regarded. She comes with a rich history behind her. She is the immediate past president of Society for Oncology Massage. Her life was spent as a registered nurse and as a massage therapist.

Johnnette du Rand: She has been very active in the massage community. Also passed President for National A MTA and a board member with A-F-M-T-E for those of you who wouldn't know, Alliance for Massage Therapy and Education.

And today she is a reviewer for compter Commission for Massage Therapy Accreditation. And between the two of [04:21:00] us, we will be directing the q and a that came in from attendees at today to, to the panelists.

MK Brennan: Thank you Jeanette. there are some questions coming in. I have one though, starting for Tara in that you talk in your presentation about the, um, more technical kind of things that somebody has to deal with in oncology, massage ports. The whole deal as well as the emotional side of it, which I know is fairly strong.

MK Brennan: What characteristics would you see a therapist should have in order to manage and balance for themselves? This team work?

Cara Thurman: That's a great question. Thank you so much for asking. A couple things I think about for especially newer practitioners coming into the, the oncology space. I look, we, we can look [04:22:00] for people who.

Cara Thurman: There's some more technical skills that we look for, which are organization professionalism or things like self-directedness, the ability to, I mean, I guess that all that all goes under that same umbrella. One of the other things we think about is does this person know the difference between empathy and sympathy, and can they work in that way?

Cara Thurman: Are they very aware of scope of practice issues that may come up? Making sure that we're staying inside of our scope of practice while we're working and not taking on technical. Questions or things that are way outside of what, what we are really trained and licensed to do. We might all have our own opinions or thoughts on different things that we can add into oncology care, but that really doesn't belong in our treatment.

Cara Thurman: And so I'm not [04:23:00] sure if that answered the question, but it's a, it's a whole array of things. It's really a lot of different angles that we kinda look at it from because. From a lot of experience and having people come on the team that maybe weren't the best fit. Learning from those failures or opportunities where we just made that wrong call, and some of it also is a little bit of confidence and being able to, especially in an infusion center situation, at least the way our programs are set up.

Cara Thurman: We're really needing to go in there and explain to people who we are, what we're doing, come across with confidence and kindness, but not cockiness. And certainly make sure that people know, you know, this is an

option. This is just something that we're offering you. It's a free service, so it, it's just a, it's a, it's a, a good, it's a lot of.

Cara Thurman: Things combined [04:24:00] that needed to be taken into consideration because there are some people who are amazing massage therapists that maybe this work just isn't the best thing for them.

MK Brennan: Would others on the panel have any insight or ideas also to share about that?

MK Brennan: Okay. Well, Cynthia, I have a question for you. That came in, came, and that is, is the training for MTS also eight weeks long that came out of your presentation?

Cynthia J Price: Oh, the, there, there's different levels of this training. The initial training is six days and then people can go on to do more advanced training.

Cynthia J Price: But the initial training is six days.

MK Brennan: Great. And the second question for you is, what was the website again? To get an email from?

Cynthia J Price: The website [04:25:00] is is, I can put it in the chat if, would that make Okay. I think somebody already did actually, but I can do it again. That would be the easiest thing. Yeah.

MK Brennan: Great.

MK Brennan: Thank you.

Cynthia J Price: Sure.

MK Brennan: That it.

Johnnette du Rand: I am going to direct this question at at Holly and at Nicola. Would appreciate responses, what you have to share from both of you. So there were a series of questions that came in and I've, I've grouped them together. So it's a trifecta and it has to do with skincare and it has to do with product ingredients, use of skincare with regards to prevention, timing in reduction of side effects.

Johnnette du Rand: And current hospital protocols. So the question is specific to the use of skincare products before radiation starts. And after radiation is completed, and I [04:26:00] would imagine it would fall into that period that Holly had marked as the chronic phase, so between 90 days and five years. So the question is, are there any over the counter topical skincare ingredients that have been shown to reduce or mitigate radiation related skin side effects, including skin fibrosis?

Johnnette du Rand: Is there any research indicating that using skincare products before radiation even starts can help reduce the side effects on the skin or fibrosis? And is there a current standard within hospital protocols that advocates for the use of over the counter products for patients to use either before their treatment starts or once they're in the healing phase?

Johnnette du Rand: And Holly, I think that speaks directly to some of the things that you were talking about. So maybe we start with you and then segue [04:27:00] into to if Nicola wants to add something to that.

Holly McMillan: Sure. Yeah. So in terms of pre or post, we don't often get a lot of times with patients before. So we get a cancer diagnosis and then we're pretty quickly moving into radiotherapy.

Holly McMillan: So we don't have a as much pre-time as we'd like, and we do sometimes have. An area, a window of opportunity between surgery and radiation. At that point, it's really dictated by the surgeon and the radiation team because if we have healing scar lines that we have to negotiate, um, they're pretty particular just about putting the healing ointments and some antibiotic type of ointments on there.

Holly McMillan: I do know that our radiation teams are quite specific during radiation about no fragrance, no alcohol based products. It's also a rule, at least at our institution, several hours leading up to the radiotherapy itself. Nothing, they can have nothing on their skin. They [04:28:00] actually, it's like pretty long, I wanna say six to 12 hours before the radiation.

Holly McMillan: They want nothing on the skin to interfere with the radiation itself, and then they're free to put on whatever they want after. But I would say in terms of specific products, I know that a lot of. Again, I'm not promoting this product, but a lot of what's used in our institution is Aquaphor. It tends to check enough of the boxes, um, but they're not as much specific.

Holly McMillan: There's just certain ingredients they don't want in it. Again, alcohol and fragrance being two of the more specific that I hear. Um, when it comes to skincare product after the other, the other that's non-negotiable is FPF. The radiation teams are pretty much demanding SPF on anything that was radiated.

Holly McMillan: Once we move into that chronic and even post phase, that that tissue will burn much easier, so they want it covered.

Johnnette du Rand: Thank you.[04:29:00]

Johnnette du Rand: Nicola, is there anything that you want to contribute to that or not in particular?

Nicola McGill: Nope. She said it all. Just that most of what I'm hearing again and reiterating the no fragrance and no alcohol, and I am always just going in line with what the radiation oncologist. Are, you know, specifying and they're always providing what they recommend to mitigate as much tissue damage as much as they can following the treatments.

Nicola McGill: But I think it's important to also recognize that that radiation, it can, it doesn't start to rehydrate, that tissue doesn't start to rehydrate until. You know, the two years out, that's when you're gonna start getting that rehydration. So again, the absorption of these products on the skin, all of that is, is impacted in a huge way.

Johnnette du Rand: Thank you, Holly. I'd like to circle back on a couple of the answers because I think it would be of interest to aestheticians [04:30:00] who, who watch the recording or who are here. So. Without product promotion of course, but what you mentioned is that Aquaphor is a, a very frequently recommended product, and that of course has a high petrol latum content, and that is frequently of concern to skin therapists because, because of the derivative that it is.

Johnnette du Rand: But petrol as a. Core ingredient within products is frequently used within healthcare. So it would be safe to say that it is a safe ingredient to use in products and that it serves a very valuable service for what it does with regards to helping reinforce the barrier layer on the skin and protect the skin from infection, and to create an environment where the skin can heal.

Johnnette du Rand: So. But something very valuable from what you've said is to remove the fear from that. Thank you for that. [04:31:00] And then with

regards to SPF, we have two different types of SPF that we could be using. We could be using a mineral based, so a zinc based, or we could be using a chemical based. And in the moment we start using the word chemical, it starts becoming frightening, although.

Johnnette du Rand: Chemical based sunscreens very popular in Europe, more so than the others. But as far as you are aware, within the hospital protocols, do they tend to veer for one or the other, or are they just happy that it's an SPF protection?

Holly McMillan: You nailed it. They are just trying to get SPF protection. They are not specific. They just want the skin protected and healed. And that's the same with the Aquaphor. Again, not, not promoting that product, but it is well tolerated by a number of our patients and they're the biggest role here is again.

Holly McMillan: [04:32:00] Lymphedema for infection. They're trying to protect that skin at all costs. It's not even just the dermatologist, it's the radiation oncologist as well that are, are promoting that if it is tolerated by our patients and protecting that skin barrier. They, they will promote it, and again, there's others. We even, we actually have, you might be able to, to research it and I will see if it's publicly available.

Holly McMillan: We have a skincare handout at MD Anderson where it lists several products and the, the non-negotiable sort of SPS guidelines. So I'm happy to take a look and see if I can send that out.

Johnnette du Rand: Thank you Holly. I have, I have a follow up question for you unrelated to skincare, and it has to do with, you referenced in your presentation you spoke about the increased risk of stroke because of radiation fibrosis in the area and.

Johnnette du Rand: It's one thing to be working in a hospital. This was one of the questions that came in. It's one thing to be working inside of a hospital where the therapist has easy access to patient records and can more readily speak [04:33:00] with attending staff. It's another thing to be working in private practice. So when we are working with these head and neck cancer patients many years after their treatment.

Johnnette du Rand: Two questions I guess is, does the risk of stroke because of fibrosis, reduce, and how often are patients going in for tests to assess the risk? What should we be asking them as therapists? Because undoubtedly very

relevant to massage therapists, but estheticians are predominantly working head, neck, DeClue region, so, so that is the area where we're spending most of our time.

Holly McMillan: Yeah, you've got it. Absolutely. Do those of us that work in hospital have easier access? Yes. I can click on a button. I get the color gradient, I get the dosing. I get everything I want. I have access. But what I will tell you is that you are everyone on this. Call is absolutely a part of the healthcare team and for the safety [04:34:00] of the patients.

Holly McMillan: Do not be afraid to ask for it. Sometimes there's a challenge between us as sort of outside the hospital providers and then those like the oncologists that are inside of the hospital network, but. It's also helpful to put some of the, the onus on your patient if their medical records, they can usually log into their portal and see it.

Holly McMillan: So even when they're with you say, Hey, log into your app. See if we can pull this information up. It's their information. They will have access. A couple of things to think about. I brought up sort of the subsite and why it's important to know where your patient's primary tumor was. If they had oropharyngeal cancer, particularly in the base of the tongue, assume.

Holly McMillan: Assume it is safe to assume they got bilateral neck radiation. And that's when we need to start being careful anytime that lateral neck, so lymph node levels two through four, if they got hit, we are hitting that carotid. So it's always safe to assume they've had radiation to that area. Even if you don't know, you're not gonna hurt them by assuming and, and being extra cautious.

Holly McMillan: Um, one [04:35:00] of the other things you want to ask for beyond the radiation plan is an ultrasound report of the neck. We're moving into an era where. Funding is challenging right now with insurance and what is covered. But in survivorship models, they are working toward getting at least annual ultrasounds so that we can watch that as the patients go.

Holly McMillan: Our threshold is greater than 50% and less than 99 for stenosis and blockage. So those are the numbers that we're looking for. The thing is, if you really don't have access, sometimes we take a lot of medical photos for our patient charts. When you take a picture of a patient with head and neck or they take a picture of themselves, you turn on the flash, you can see with the flash where the radiation, there's like a darkening of the tissue and it sort of outlines it.

Holly McMillan: It's magic. And with these new iPhones, they do wild things. But again, not promoting iPhones, but it turn on the flash and take a picture and see if you can get it. 'cause sometimes you can get the shadowing. All I want to add about that.[04:36:00]

MK Brennan: Pretty interesting, frankly, who knew what the bones could do these days?

Holly McMillan: I know.

MK Brennan: Know, I have a question for, I know I have a question for Cynthia. Someone is asking, Patricia is asking for MABT, has it been applied to teenagers with metastases?

Cynthia J Price: Oh, oh. Um, I. I don't know if it has, I mean, I have not worked with teenagers with metastasis personally, so I don't know whether anybody, whether anybody I've trained has or not, so I'm not sure.

MK Brennan: Oh, okay. Well, and I also have a question for Nicola. Given the risk of a compromised immune system for head and neck cancer patients. Given the number of lymph nodes that are in the head and neck area, um, with [04:37:00] damage to that lymphatic system, are the extra precautions you recommend. Um, based on the specifics for head and neck cancer and the prevalence of the lymph nodes and the damaged ones,

Nicola McGill: you are

MK Brennan: to help reduce the risk of infection.

Nicola McGill: Infection in that region or just generally systemic? Yeah.

MK Brennan: General, any any extra precautions that you would recommend for a massage therapist to take? I

Nicola McGill: mean, I think, again, hygiene practices are always essential when somebody has lymphedema no matter where it is on the body, because again, compromised immune lymphatic function is gonna be detrimental to the localized immune function.

Nicola McGill: So hygiene precautionary measures are essential, and I do, I do believe we don't have that research right now to prove that manual lymphatic drainage is gonna fix somebody's immune function, but it is likely that we can

support surrounding immune function. By moving lymphatic fluid. Um, and obviously just [04:38:00] lifestyle stress management.

Nicola McGill: Alongside of that, I mean a, again, the skin products that are being put on, on the tissue and just looking for the integrity of the tissue. So if ever there is ever any long-term, the long-term damage on the tissue and the skin is still kind of like not healing and breaking down, avoiding the area. And just really working surrounding areas to support immune function in the region.

Nicola McGill: But I think it's, it is a very, like I said, looking at the entire lymphatic system, which plays a role in immune function. So just generally supporting overall immunity with MLD and other, other areas to support immune cells, circulation. I think diet, lifestyle, and really truthfully, when you're working in those areas, hygiene and your standard of care for that is really important too.

MK Brennan: Great. Thank you. And this is a follow up or goes along with it. Patricia's asking what data is there that lymph, no lymph vessels can regenerate after one [04:39:00] or two years post-radiation or surgery.

Nicola McGill: So I did put at the bottom of one of my slides, the study that came out by Dr. Eva Vic and her team at the University of Texas.

Nicola McGill: And I actually, I have the paper and I listened to her on a webinar just talking about there is that likelihood that with. Regular manual lymphatic drainage. We have the ability to promote lymph angiogenesis in the surrounding tissue, and that's why the intervention of these manual therapies is gonna be more appropriate for the healing of the tissue and regeneration.

Nicola McGill: And also not, not reducing the risk of lymphedema, but obviously creating more lymphatic vessels. So that paper is, is an easy one to read. Some papers that you get are a bit more challenging, but I think I did share it on that. It was at the bottom of one of those slides. Which I have actually. Yeah.

MK Brennan: Thank you.

Nicola McGill: Well, and, and I just, and I just wanna add to [04:40:00] this briefly, the imaging that they've, the in endign green imaging that they have shown is, which is why we treat lymphedema patients differently now to what we did maybe two or three years ago, is knowing that the lymph regenerates itself and finds collateral pathways.

Nicola McGill: And a lot of this is happening as part of our immune response to find those new pathways. And so it's the imaging that is actually showing that to us.

MK Brennan: Wonderful. Thank you.

Johnnette du Rand: I have, I have a question for Karen. I have a question for Holly. So Kara, they, and they're both big ones. Kara, can you explain how you cope with grief when working with clients who are on borrowed time?

Cara Thurman: Oh, that's also a very good question. I'd say that. There's a lot of [04:41:00] things that I do.

Cara Thurman: One of the things was building a team so that I have people that I can work with that. That are in my direct daily life. I have actually obviously had many connections with people in oncology massage that have had many, many years of experience more than I do. But they don't, I don't see them on a regular basis and I oftentimes don't see them in person, especially since COVID.

Cara Thurman: So, you know, building that team has been a really huge part of continuing to. Do this work in a way that's sustainable for me and for the other people doing this work. And one of the things we do is every quarter we have either an oncology lunch or dinner as a team. Um, and. There's oftentimes where we're there for three hours and each time is a little bit different Sometimes we have very structured, like a very structured [04:42:00] agenda.

Cara Thurman: We had one in December and we have one coming up on Monday, but in December it was like a wrap up of the year. We did a lot of supportive kind of things such as just different prompts and questions that they could each answer if they wanted to tell their stories. Share. Experiences they had in in patient settings or with patients that we all know that have either not done as well as we were hoping or maybe aren't doing as well right now as they had done in the past.

Cara Thurman: Just really allowing people to speak their truth and, and what they've been holding onto. And a lot of times we, we. We end up having very shared experiences because oftentimes if people are impatience, uh, in the areas that we work, sometimes they can be there for weeks. And so we've all seen them as we're rounding.

Cara Thurman: [04:43:00] We can all talk about a lot of times family members and different things that we've experienced with them. And really a lot of it is just providing that space for them to. Let go of some of the things they've been holding onto and also find shared experiences and feel like it's hard for all of us.

Cara Thurman: It's not just hard for you, Ashley, or whoever it is, it's, it's, it's a hard line of work to be in all day, every day, and. So that's one of the big things I do. And then things like this, just trying to keep connected to a community of people that are obviously deeply in this work, and I know today has been very intense, but extremely supportive for me.

Cara Thurman: I've learned so much. I find myself thinking, oh, I wanna take all this. Continuing education. I wanna bring my [04:44:00] whole team. That's not always possible. But I think just continuing to get renewed and refreshed and feeling that, that connection and that, that, uh, just being reconnected to my mission, so, or to our mission.

Cara Thurman: And so, so yeah, there's, there's a lot of things I think that I've tried to put in place. Some have been successful, some haven't been as successful, but I'd say these team. Quarterly team get togethers have been really big. And then we see each other in the office a lot too. And so just making sure that it's an open communication and people can come to me, they can slack me, they can call me if they're having a a bad day, or they're having an experience where they don't know what to do.

Cara Thurman: They haven't had this experience before. They're scared, they don't wanna hurt. So open communication and support, I think are probably some of the things that help us the most.

Johnnette du Rand: Thank you so, so about community and connection. [04:45:00]

Cara Thurman: Yes,

Johnnette du Rand: correct.

Cara Thurman: Yeah.

Johnnette du Rand: Yeah. And, and even if we don't have a team that we are immediately working with, because we have forums exactly like this, we can be more connected.

Johnnette du Rand: Isn't it wonderful?

Cara Thurman: Yes, definitely. I 100% agree and I'm very grateful for this today,

Johnnette du Rand: Cynthia. So for the therapist who has not had the MABT training for the therapist, who hasn't gone down the route of exploring education with regards to trauma informed for that therapist, for that practitioner, when a a client is, is with them in their treatment room and the client is having an emotional reaction, what are some of the things that a therapist can do to.

Johnnette du Rand: What are things that a therapist should say to a client or could say to a client that might be helpful?

Cynthia J Price: Okay. Yeah, I think, I mean that's [04:46:00] pretty common, or I think for massage therapist to have that happen sometimes, right? Is someone does get emotional and for a variety of reasons and with. I think the most helpful thing we can do is be present with that person.

Cynthia J Price: Right? And so that's part of what. The work I, I do is really about, is how to be in presence as a therapist and with our clients. But really it's, it's just being compassionate, right? It's just saying, Hey, I hear you. This is really hard and I'm here with you and. It's okay that you're feeling whatever you're feeling, right?

Cynthia J Price: So that there's space for those emotions to to, to be there and to be okay to express it Doesn't mean we need to fix it. It doesn't mean we need to understand it [04:47:00] more. It's just about accompanying that person in the moment, and that's, I think, the most important thing.

Nicola McGill: Thank you.

MK Brennan: And I have a question for Nicola.

MK Brennan: Someone was asking, is there a specific way that they can find out what the updates are for class graduates?

Nicola McGill: Well, the, the, the, the key change as a result of all the imaging and studies that have been done, we are just changing the way that we treat regional lymph nodes that have been impacted through surgery and radiation.

Nicola McGill: So it was up until about three years ago, we were instructing a lymphedema sequence where you would completely use the anastomosis and not work in the area of the lymph nodes where the radiation has been, IE, the remaining lymph nodes. Now, in our classes, we teach that we can work those lymph node. We [04:48:00] do direct medial aspect of the upper extremity and lower ex extremity into those nodes and still use the anastomosis, but we don't need to avoid those nodes completely because these studies are showing that how these lymphatic vessels, they're still, some of them are still functioning.

Nicola McGill: So we don't overwork them. We are just working the area as well as using the anastomosis. So it's really changed a lot how we treat. But from a field of manual lymphatic drainage, you know, lymphedema therapists are learning this new, um, way of treating people even through the lymphedema training programs.

Nicola McGill: So at close training, we just tend to like, what are the latest studies showing? And so we are, we're adapting accordingly and it makes it a lot less complicated for the person that's providing manual lymphatic drainage. Especially for the massage therapist who's not trained as a lymphedema therapist.

Nicola McGill: There's always been this kind of a little cautionary feel around like, oh, can't go into any of the lymph node [04:49:00] areas, but now we can. And that's what we're teaching. Okay. So it's not, I mean, again, the, the, the manuals are always being updated that we teach and the latest research, et cetera. But this has been something that I've had to change as a practitioner, as well as an instructor in that I'm.

Nicola McGill: Teaching students now how to actually use those remaining lymph nodes. Now, I will say that obviously you have to palpate and be mindful of any incisions that are still uncomfortable, any adhesions with the long-term effects of radiation. There may be some situations where, okay, palpate, you don't work into those lymph nodes, but it's what we're teaching.

Nicola McGill: Now

MK Brennan: that feeds into a question from Cynthia earlier. That is for you and for Holly, perhaps. How important would you say lymphatic massage is compared to regular Visa massage in cutting neck answers?

Cynthia J Price: Oh, I think that's a good one for [04:50:00] Holly to answer.

MK Brennan: Yeah. Not you, Cynthia. It came, it question came from Cynthia.

Nicola McGill: Oh. Oh, okay.

MK Brennan: From a different Cynthia, so,

Nicola McGill: okay.

MK Brennan: This is for Nicola or Holly.

Nicola McGill: Okay. Does Holly wanna, I'm, I'm happy to answer and then Holly That's fine. Continue on. Yeah, go. Go for it. I, I mean, I think especially after even Kathy Ryan's presentation, seeing what's. How these cancer treatments are impacting the lymphatic system.

Nicola McGill: And I think it's also important to recognize, and especially for those that have have some studies around manual lymphatic drainage, is that we know that general massage increases the blood circulation. That is what's going to create, ultimately will create your lymphatic fluid that needs to be removed by the lymphatic system.

Nicola McGill: So. When you are incorporating manual lymphatic drainage and supporting the movement of lymph, not necessarily creating lymph, the movement of lymph [04:51:00] is gonna be more, um, it's gonna be more supportive to wound healing, tissue healing, reduction of fibrosis, all of these things that all of us, as presenters have spoken about.

Nicola McGill: So I think manual lymphatic drainage is. Imperative to, to support and reignite a lymphatic system that has been compromised from all these cancer treatments. Massage has its place. Oncology massage has its place in, in the realms of muscle and relaxation, et cetera, there. And the other point I'm trying to say here is just that the, the, the touch in itself is important, but being focused on lymphatic movement.

Nicola McGill: When the lymphatic function has been disrupted, I think is very, very key. I'll let Polly continue.

Holly McMillan: I, I support that. I think they both have a place, we know prevalence rates are in the nineties for both external and internal lymphedema. So I think as soon as we can get moving, we [04:52:00] have clearance, we get going.

Holly McMillan: I also think massage, so I've seen it firsthand. We have a, a lovely, we have an entire department massage therapist at MD Anderson, and even just from. A basic cancer, anxiety, depression, touch therapy. It's just absolutely fabulous for patients, caregivers, families, uh, throughout the entire process. So I think they're both just massively warranted.

MK Brennan: Great. Thank you. The question came in from Karen that says, and this would be, do you have any information on treating head brain cancer patients with idiopathic inal hypertension?

MK Brennan: I guess probably Holly, that might be good for you to have

Holly McMillan: it sort of broke up. I'm sorry. Can you read it one more time?

MK Brennan: Sorry. It's, do you have any information about treating head brain cancer [04:53:00] patients with idiopathic intracranial hypertension?

Holly McMillan: No, I do not.

Nicola McGill: Yeah, I mean, I, I haven't seen, I haven't seen much around that either.

Nicola McGill: I know that there's growing literature around the implication of that intracranial pressure and the role of the glymphatic, which has been a hot topic of conversation. But at this point, we don't have enough data to state clearly. Yeah.

Holly McMillan: Yeah, the only consistent thing we're seeing in the lymphatic literature right now is how important sleep is.

Holly McMillan: And again, from a massage therapy standpoint, we could put 'em to sleep, touch therapy. Maybe that'll help, but it's, it's still real, really weak evidence at this point.

Nicola McGill: Yeah. But it's interesting how all of that, like Holly talks about the sleep, that whole interconnectedness of all the things that we do with our touch therapies, no matter whether it's lymphatics, massage, um, everybody's work [04:54:00] here, that it's, it's all about in that human experience from that point of view.

Nicola McGill: Yeah.

Johnnette du Rand: I have two questions, Nicola. I think that these are going to fall to you. The the, the starting point though was from Holly's presentation and one of the slides that Holly showed was someone who had had. Radiation to one side only, and then someone who had had radiation bilaterally and how that would change the lympha lymphatic fluid pathways.

Johnnette du Rand: So the first question I have is related to MLD, and then the second question I have is related to a facial, to aesthetics to what the aesthetician would do. So the MLD related question is in considering that the practitioner would need to rely on the patient's self-report. Of where surgery and radiation took place, and this is from Bambi, is, is there a safest [04:55:00] redirection approach for MLD of the head and neck, assuming one is trained in this modality?

Nicola McGill: I'm presuming you're meaning utilizing other pathways, is that what you're saying? Correct, correct.

Johnnette du Rand: For the MLD practitioner.

Nicola McGill: Yeah. So for the MLD practitioner, I mean, again, most of the time, I mean, I'm not, I'm only speaking for the organization that I instruct for. I don't know what other schools teach, but we certainly don't teach that in the manual lymphatic drainage program, specifically head and neck cancer.

Nicola McGill: And you know how to do MLD on that. It's a little bit more, there's a lot more tr level of training required for it. But what I do talk about is the ability to, if we have that lymph build up, or we just wanna create those new pathways, crossing watersheds in the head and neck region and directing safely around to the axillary lymph nodes.

Nicola McGill: And that is, again, something that has. S my initial training as a lymph edema therapist. Many years ago, that's what we were doing. [04:56:00] And now again, same thing with these studies that are coming out with Iny Green Imaging. We know that other pathways are being created and we are able to move over scar tissue.

Nicola McGill: Again, I would, I would want to say that anybody that hasn't had that level of training, safest thing for you to do is to utilize the anastomosis. Then when you've had the training, a longer class time, knowing how to work more specifically and subtly over that scarring radiation tissue, so. I would always opt for, and I mean even for me, if I've got somebody that has got a lot

of cysts and there's significant damage here, I'm not even gonna think about going over that tissue.

Nicola McGill: I'm using the anastomosis. 'cause at the end of the day, I want my com, my patient to be comfortable, um, and not feel, have any more for more discomfort than what they're already experiencing.

Johnnette du Rand: Thank you. And then I, I'd like to take a very [04:57:00] similar question, and I'd like to ask it from the aesthetician's perspective.

Johnnette du Rand: So if we are thinking about a classic facial, a traditional facial, a European style facial, which is what they spent most of their time doing, and if we are talking about a client who might have some degree of skin or tissue fibrosis but does not have lymphedema, that and is well healed. Is well done after treatments and they've come in for a facial.

Johnnette du Rand: If the aesthetician is following the strokes down the neck, crossing over the clavicular and spine of the scapula watershed is maintaining the pressure they're supposed to during a facial anyway, which traditionally would be a one or two on the Walton scale, and during the massage, possibly a three.

Johnnette du Rand: Would that be considered safe to do for the aesthetician?

Nicola McGill: I mean, I believe, again, you've got to have that good intake. Where are they at? How, how long out from their [04:58:00] procedures have they been and getting that good information from them and their skin integrity, I think is a, is a good thing to ask. I think as, it's a very difficult one because I think I have numerous aestheticians that take my class and they're rethinking what they've been doing because obviously your lymphatics is draining down and in as an in the aesthetician world, everything is moving up.

Nicola McGill: So I think it's a case of the, you know, education. I think that is a really important thing, and I'd like to see more manual lymphatic drainage classes for estheticians to be able to get that more information. Yeah,

Johnnette du Rand: absolutely. Thank you. This topic was so particularly on point for the aesthetician community, so could not be all pleased with, but thank you to the organizers for arranging this as as the colonel for today.

MK Brennan: Yes. I have a couple of questions for Holly that came in from Janae. She's [04:59:00] wondering if you could please talk about chemotherapy

and radiation. Possibly transferring to a therapist through skin is the first question.

Holly McMillan: Yeah, that's a great consideration when it comes to transfer the, it's important to know which type of radiation they had. Primarily forehead and neck. We have external beam radiation, so by far the most common, a beam is not radioactive, so no residual radiation on the skin. Radioactive material can't transfer it.

Holly McMillan: It's not a radioactive process. On the skin. Um, the exception though is brachytherapy. Those patients are often isolated after treatment for various amounts of time. It depends on their treatment plan. Usually those are highly protected by the team. Highest transmission rates after brachytherapy is really within the two first two months.

Holly McMillan: Radiation decays over time. Um, so usually within like a three to six month window, the RT [05:00:00] risk is minimal. Anytime a patient has brachytherapy, I am seeking direct approval from the medical team to understand what they think the radioactive decay process looks like for that patient. That's radiation, chemo, chemo is interesting.

Holly McMillan: It's metabolized and excreted primarily through urine and feces, so hopefully not a, not a worry to us, but it does also come through sweat so intact. Skin contact is not as meaningful of a route for a therapist, but there could be trace amounts in it. Um, typically after an infusion, it will linger for 48 to 72 hours.

Holly McMillan: Um, but again, we're looking for intact skin. It's reasonably safe to proceed. Again, always check with the chemo team. Wearing gloves is also an absolutely appropriate safety. Precaution. We always di avoid direct contact over ports and patches as well for any kind of dermal contact, but good hand hygiene and gloves can be used for acute [05:01:00] chemo scenarios.

MK Brennan: Great. Thank you. Kara, do you have anything to add to that? Because you would have that in your program as well.

Cara Thurman: I, I agree with everything she said. I'll say this, we work in multiple hospitals where gloving is mandatory for us when we're doing direct patient care. So what we usually do is we obviously are going to, because we work in multiple different healthcare systems, we are going to follow the protocols of each individual healthcare system that we are in.

Cara Thurman: During that particular shift or that that time that we're working. And on top of that, as a team, we always support people doing what makes them feel the most comfortable. So we do have some people that, and, and we also see people at the office, and so. If a, if a client had RA chemotherapy two days before and they've come in, we a hundred percent [05:02:00] support our team.

Cara Thurman: If they feel most comfortable wearing gloves and using, we, we provide them at the office. If they feel comfortable not doing that then, and the, and the client also feels comfortable, then we can do that. So again, we, we follow the protocols for each individual system and then we just support each other in some, some people on the team or even other nonprofits and different things.

Cara Thurman: We work with partners, you know, we want people to be safe. We want them to feel comfortable. We want them to feel confident in their work. So we. As long as it is a reasonable request, we definitely try to support what, what makes people feel most confident in their work.

MK Brennan: Great, thank you. The second question, Holly, for you, and it's a quick one, will MD Anderson post another oncology symposium?

Holly McMillan: Which one we, is it was it specific?

MK Brennan: I think there's the [05:03:00] question here of the oncology and then I saw in the chat of the integrative. Symposium.

Holly McMillan: Oh, those are always the best. Those are whenever integrative medicine, I don't know. I'll, if we keep chatting, I'll Google it on my intranet and see if I can find out.

Holly McMillan: They are just the best on integrative medicine because then they host like Tai Chi and they just do so many. Amazing. Sorry. Yes, I will. Let me look. Well, you ask the next question. Can

MK Brennan: I

Cara Thurman: just. Can I just add, I, I think what they're asking, 'cause this is something I've been looking into also, is MD Anderson used to host a, I believe it was either a two or three day integrative oncology seminar.

Cara Thurman: They may have called it a conference, I'm not sure, but it was multiple days. It was the, the several that I went to were massage therapy, yoga therapy, and maybe acupuncture at the time. And so. If that's what people are asking. I am also interested in, I know they have not done it since, [05:04:00] I wanna say like 2017 or something, maybe even before that.

Cara Thurman: And so I've been watching for years. I just haven't seen anything come up. So if anyone has any information, I'm very interested. Also,

Holly McMillan: I

MK Brennan: just,

Holly McMillan: I the

MK Brennan: link

Holly McMillan: in the, in the chat it looks like, yes, January 20, 27. I just put the link in.

MK Brennan: Thank you. I hope it was take a look. Um, I have one final question, and I know we're coming close to time, but for Cynthia and Holly, because of the research.

MK Brennan: So Holly, question about whether you would be doing a follow up study to the one that you presented, and Cynthia, because I know you and your interest in research and the work that you've done. What direction do you see would be the best for going forward in studying areas in oncology? [05:05:00] Massage.

Holly McMillan: Go ahead Cynthia. Do you wanna go first?

Cynthia J Price: Yeah, go. You can go first. That's fine.

Holly McMillan: I think it always changes. I think asking relevant questions that are meaningful to both practitioners and patients are what we need to keep asking. There's a lot of. Untapped potential and specifically in our community. Uh, I focus a lot right now on functional outcomes and how what we do support the patient functionally, but I think there's opportunity in every realm of what we do moving forward.

Holly McMillan: I do. I can appreciate that. In order for us to get funding and for us to continue to get more placements in hospitals and sort of as frontline for these patients, we do have to keep putting good quality research out. So we have to find the funding to do the research. Cynthia can appreciate that and then publish our findings because they're there and they're real, but we have to put them in front of policy makers, um, to make sure that [05:06:00] our services continue to be covered for patients.

Holly McMillan: That's sort of where I'm at right now.

Cynthia J Price: Yeah. Yeah. I mean, it is a tough time right now, right? For, for research funding and hopefully everyone here is familiar with, uh, the grant that are available through the Massage Therapy Foundation. There's small research grants, there's community grants, and now there's some very much larger grants that are being funded just over the last few years.

Cynthia J Price: So look at that. If you're interested in research, I think that there's, I, I chatted with with Holly before this, this pres, in thinking about doing this presentation and. One of the things that Holly shared with me was just how much more research could happen around oncology with care around the issues of really supporting clients emotionally.

Cynthia J Price: And I think I've seen quite a few studies that have been funded because I [05:07:00] review grants for the massage therapy for exam foundation, for example, that have been about implementation science. For massage therapists working in different hospital and oncology care kind of environments, which I think is wonderful 'cause it's about really the sustainability of this work in, in clinical care.

Cynthia J Price: I think we still haven't really done much around these questions about just. The, there, there certainly often are measures of wellbeing and emotional wellbeing, but the ways in which more of that can be focused care in oncology massage and is I think, really a, a very important question that meets some more attention.

Johnnette du Rand: I have two last questions. We got a couple of questions with regards to supplements. Fibrosis. So whether that's tissue fibrosis or skin [05:08:00] fibrosis, it wasn't specified, I'm not sure. And the two questions in particular from from two different attendees, one had to do with collagen supplements and the other one had to do with a septate supplement.

Johnnette du Rand: Is there anybody on the panel who is aware of any research with regards to oral supplements that one could take to help reduce. Of fibrosis in some capacity?

Nicola McGill: I'm not aware of any. I don't know. No, I'm, I'm not.

Cara Thurman: I also do not, that's outside of my scope.

Nicola McGill: Yeah.

Holly McMillan: There are several trials right now for those, specifically for the Serrapeptase.

Holly McMillan: I, I'm unaware of anything specific to that, but, um, there are a number of randomized control trials happening right now, which is very encouraging for radiation fibrosis. They're looking at comparing, gosh, it's statins, it's pulmonary fibrosis [05:09:00] medications, it's anti-inflammatories. And they're randomizing these patients to different arms.

Holly McMillan: And what's lovely is the two that I know of right now are actually happening at MD Anderson. That's why I know about them. But one is happening before the treatment and we get to follow those patients all the way through to see if they actually prevent these things from happening. And then the other is sort of the same type of model, but once they have established fibrosis, can we actually reverse it?

Holly McMillan: And we're looking at those right now. So in terms of supplements, I don't know, but some of the other, other sort of heavy hitting drugs, they're working on those right now.

Johnnette du Rand: Holly to follow up on that question, and you might not know, but with regards to the first trial that you mentioned, where they're looking at the supplements with regards to prevention, do you have any recall at all on how long that trial is for?

Johnnette du Rand: Is that for six months? For 12 months for two years?

Holly McMillan: We, yeah, we follow the patient. They'll take the medication for a year, so they have to, they'll go through their, we take baseline assessments so that we know what everything looks like. They go through their radiation. [05:10:00] If their first scan comes back that there's no evidence of disease,

they're then on medication for a full year and we check them every three months.

Holly McMillan: And then it's between the patient and the the provider if they wanna continue on those medications.

Johnnette du Rand: Thank you. And then my last wrap up question. Everybody emphasized during the course of their presentations how important it was to approach care with patients as an integrative care team and the licensed specialties that were mentioned the most often as.

Johnnette du Rand: To have available as referral resources for your clients. Were speech therapists, physical therapists, and MLD therapists who specialize in head and neck cancers. Obvious to that list as well is if one's an oncology trained massage therapist, you want to have an oncology trained aesthetician to refer to and vice versa as well.

Johnnette du Rand: But is there another very important specialty, in your opinion, missing from that list that a working [05:11:00] practitioner should have a relationship with so that they can refer patients to when in need?

Nicola McGill: I, I work very closely with an exercise physiologist. We're part of a, the Boulder Center for Cancer Survivorship, and it's a big survivorship program, and the exercise component is very, very important.

Nicola McGill: Just not, not just for physical strength, physical mobility, but mental and emotional, um, support with that as well. I volunteer with a group that we take patient, patient cancer patients for hikes and the, just that movement and exercise I think is very, very important. Yeah.

Holly McMillan: I would add to that we have an entire pain management service that we work with very closely.

Holly McMillan: These, the folks specialize in pain management. I would also say physiatry. So physical medicine and rehab, they're excellent for injections or just really whole body sort of evaluation. Um, I think they're [05:12:00] fantastic dermatology. I am gonna cut myself off there, so I'll probably just keep listing everyone that I see.

Johnnette du Rand: Thank you.

MK Brennan: Wonderful, wonderful, wonderful and amazing how quickly an hour goes, and we are at the end of our time for this, so I want to take this time to Thank you, our panelists. For the great discussion today. Hopefully we have not left things off the table for you in this. Everyone on this please note we will take the questions that we did not get to today and compile answers to be forwarded to you later, especially those for Kathy who was not able to join us.

MK Brennan: We hope you have enjoyed this year's summit. And now with that we're gonna have a special message from our president. Who came after me, so it's great. It's gonna be great to see Erica again. [05:13:00] Erica, Quentin.

[05:13:01] Closing

Ericka Clinton: Good afternoon everyone. Thank you so much for attending the Virtual Healing Summit presented by the Society for Oncology Massage and the Society for Oncology Aesthetics. This has been an amazing day. The presentations were so informative and inspiring. Please, please give a big thanks to our presenters and lots of gratitude to Nicola McGill, Holly McMillan.

Ericka Clinton: Dr. Cynthia Price, Kathy Ryan and Kara Thurman. I learned so much today and feel very enriched by the impact that oncology, massage, and oncology aesthetics are having in the care of people affected by cancer. We appreciate all of our attendees and hope you had a wonderful time with us to wrap up our day.

Ericka Clinton: I wanna let you know what's next for our community. [05:14:00] First, the Healing Summit. The board has decided that we do these virtual healing summits really, really well. So we will continue with a virtual summit in 2027. We still have aspirations to have an in-person event in the next few years, so stay tuned.

Ericka Clinton: Very soon we will be putting out the call for volunteers. So if you are a preferred practitioner, please watch your email. If you would like to volunteer with us and you are not a p, please send an email to operations at S four oh dot oh. We are hoping to add two new board members in 2026. And board members do not need to be preferred practitioners in our organization as an organization.

Ericka Clinton: We appreciate professionals and educators from the fields of oncology, massage and oncology [05:15:00] aesthetics who are interested in the development and growth of S four OM, and S four OE. We will also need more

volunteers to join us and help with the S four OE education committee, our summit planning committee, fundraising and marketing.

Ericka Clinton: Now on to the best part of the day, recognition. Big thank you to our sponsor, blue Beauly, and a huge thank you to all of our volunteers. We could not have this day without your support. Thank you to our session moderators, MK Brennan, S four OM, past president, and Jeanette Durand, who currently serves on the S four OE Education Committee for the Summit Planning Committee, who made this day possible.

Ericka Clinton: Please give a round of applause, snaps in the air, whatever you'd like as I list their names. Kara Thurman, [05:16:00] who did outreach and sponsorship for oncology massage. Thekla Lui who did outreach and sponsorship for oncology aesthetics. Dana Lewellen, who did marketing and communications for oncology.

Ericka Clinton: Lymphatics, Hannah Roloff, who chaired our scholarship committee, Sharon Pollock, board Liaison Kelly Joe Webster and Erica Kless who did marketing our newsletter and outreach. Lucy Allen and Chelsea French are N-C-B-T-M-B liaisons. Carolyn Tag, who represented Education and the Educator Forum, our amazing committee chair Cheryl Johnson.

Ericka Clinton: Cheryl has stewarded the Summit Planning Committee for the last four years, and these events are successful [05:17:00] because of her leadership and organization. Her dedication to S four OM and S four OE is amazing, and we very much appreciate her and all of the countless hours of hard work. Last, but not least, Ashley Hyatt, our operations manager, who oversaw registration and provided support for the summit.

Ericka Clinton: Ashley made us all look and sound really good today. Without her hard work and commitment this day would not have been possible. We cannot make this event happen without all of these wonderful people, and I'm so grateful for their service. As we wrap up, if you are planning to receive CE credits, please make sure to complete the

Ericka Clinton: cE home study form. as this will be my last official event as president for the board of directors.

Ericka Clinton: I wanna say thank you to the [05:18:00] community that has inspired me and allowed me to lead them with intention into a future we all can be proud of. I also wanna thank my fellow board members, Kimberly Austin, Morag Corin, Cheryl Johnson, Rachel Ne Wind, Sharon Pollock, Elizabeth

Soto, Nisa Valdez. Marcus Walsh, whom I have had the pleasure of working alongside, and I will cherish the relationships that I have built with them as we stewarded the organization forward.

Ericka Clinton: Everyone, be well. Thank you again and have a wonderful, wonderful day.