



# Mindfulness and Cancer: What is it and how can it help me?

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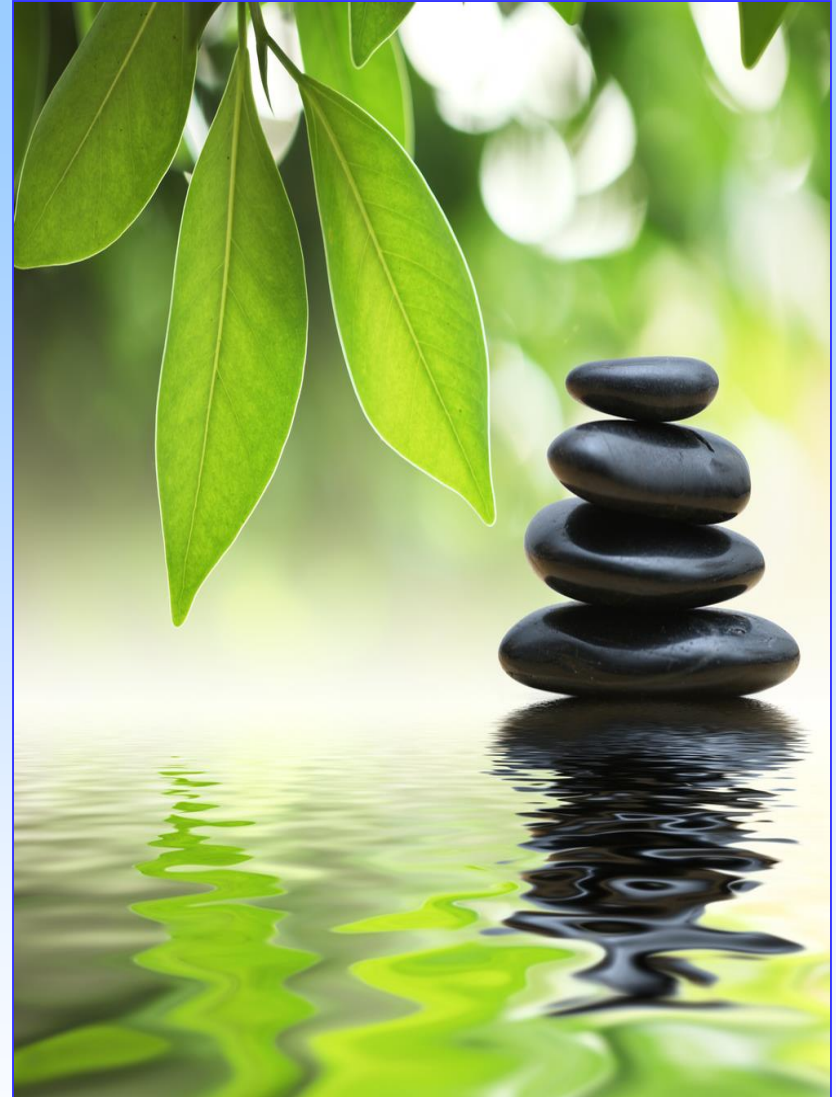
Division of Psychosocial  
Oncology

*Helping You Live Well With Cancer*



# Outline

- What is mindfulness?
- Mindfulness-based interventions
- Mindfulness-based cancer recovery
- Other mindfulness research

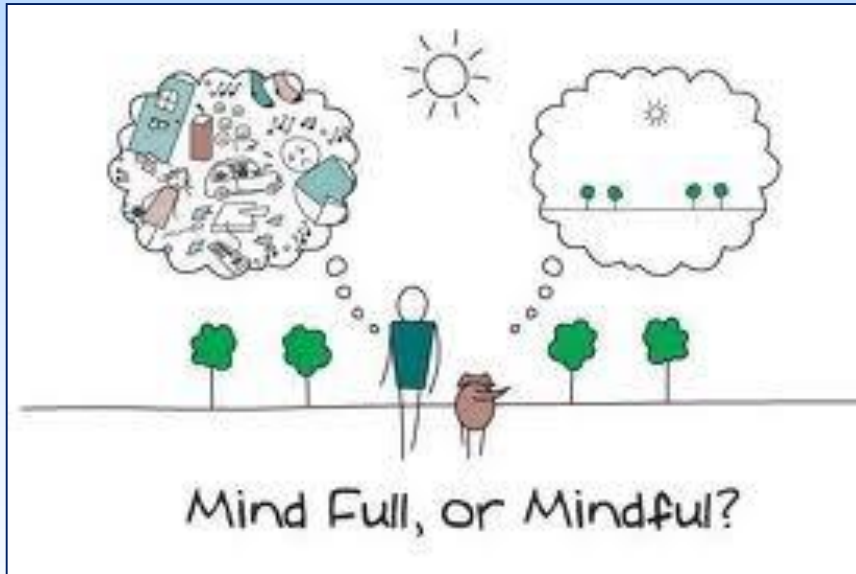


# What is Mindfulness?



# What is Mindfulness?

- Paying attention on purpose in the present moment with an open and accepting attitude
- A way of BEING in the world
- A PRACTICE



# So what is your mind doing instead?

- 50,00-70,000 thoughts per day!
- 46.9% are NOT in the present moment (mind wandering)



- Happier when in the present moment



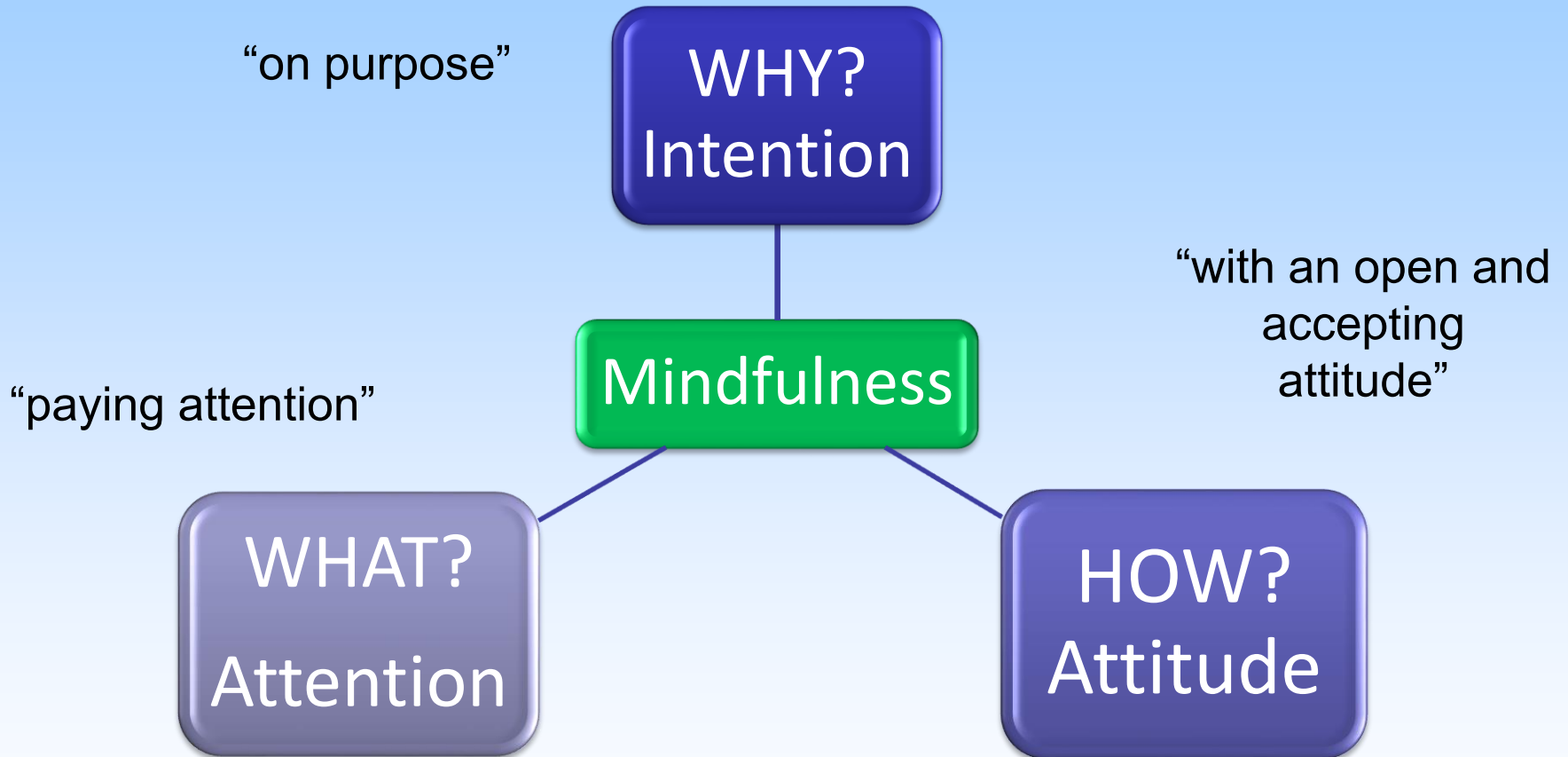
A vertical wooden stick is positioned in the center of the frame. It has three signs attached to it. The top sign is a rectangular orange card with the word "now" in white lowercase letters. Below it is a green arrow-shaped sign pointing to the right with the word "tomorrow" in white lowercase letters. At the bottom is another green arrow-shaped sign pointing to the left with the word "yesterday" in white lowercase letters. The background is a vast, blue sky filled with soft, white clouds, suggesting a high-altitude or mountain-top perspective.

now

tomorrow

yesterday

# Components of Mindfulness





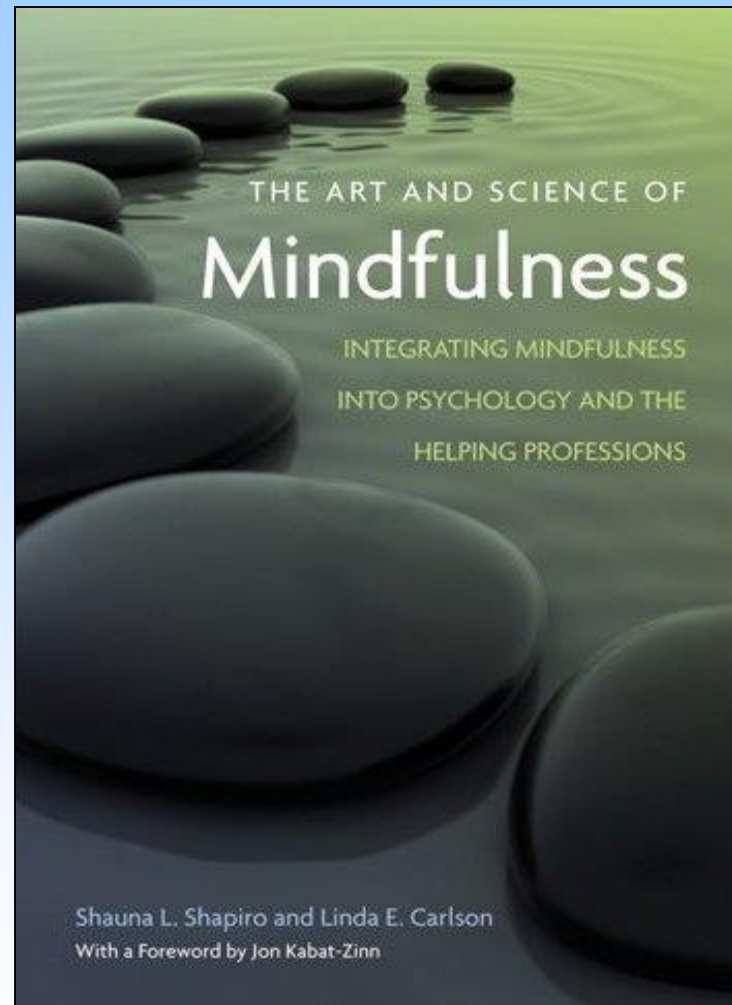
# What mindfulness is *NOT*

- Not relaxation
  - Not hypnosis
  - Not prayer
  - Not religious
- 
- Not clearing your mind of all thoughts
  - Not always peaceful/calm



# Book: The Art and Science of Mindfulness

- Shapiro and Carlson 2009
- Clinician training manual
- Includes chapters on theories of mindfulness, the mindful therapist, mindfulness-based therapies and mindfulness-influenced therapy



# *Mindfulness*

*I went to the woods because I wished to live deliberately,  
To front only the essential facts of life.  
And see if I could not learn  
What it had to teach,  
And not, when I came to die,  
Discover that I had not lived*

- Thoreau -



# Why Mindfulness?

*The only certainty in life is change*

*The unwillingness to acknowledge and act upon this reality is the root cause of all suffering*

*Mindfulness is one process by which we face and accept this inevitability*



# Mindful Attitudes

- Non-judging
- Patience
- Acceptance
- Letting go
- Non-striving
- Trust
- Beginners Mind



OR - you can be a  
judgmental,  
impatient, rejecting,  
grasping, striving,  
suspicious know-it  
all!



## *The Guest-House*



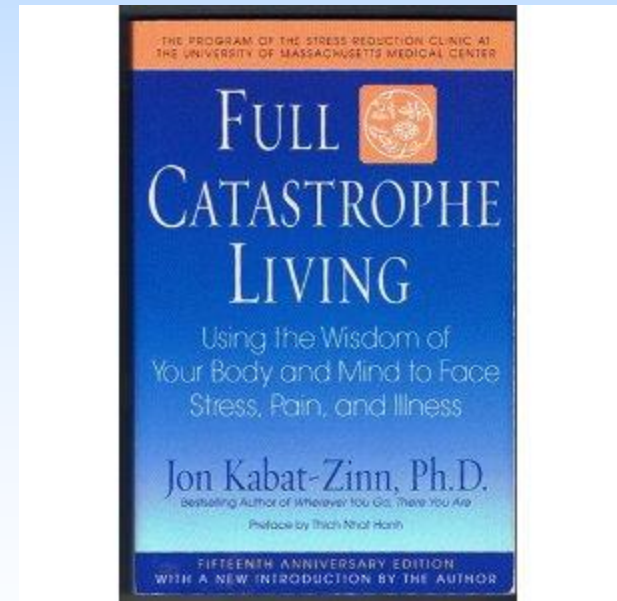
*This being human is a guesthouse  
Every morning a new arrival.  
A joy, a depression, a meanness,  
Some momentary awareness comes  
As an unexpected visitor.  
Welcome and entertain them all!  
Even if they're a crowd of sorrows,  
Who violently sweep your house  
Empty of its furniture.  
Still, treat each guest honourably.  
They may be clearing you out  
For some new delight.  
The dark thought, the shame, the malice,  
Meet them at the door laughing,  
And invite them in.  
Be grateful for whoever comes,  
Because each has been sent  
As a guide from beyond.  
- Rumi -*





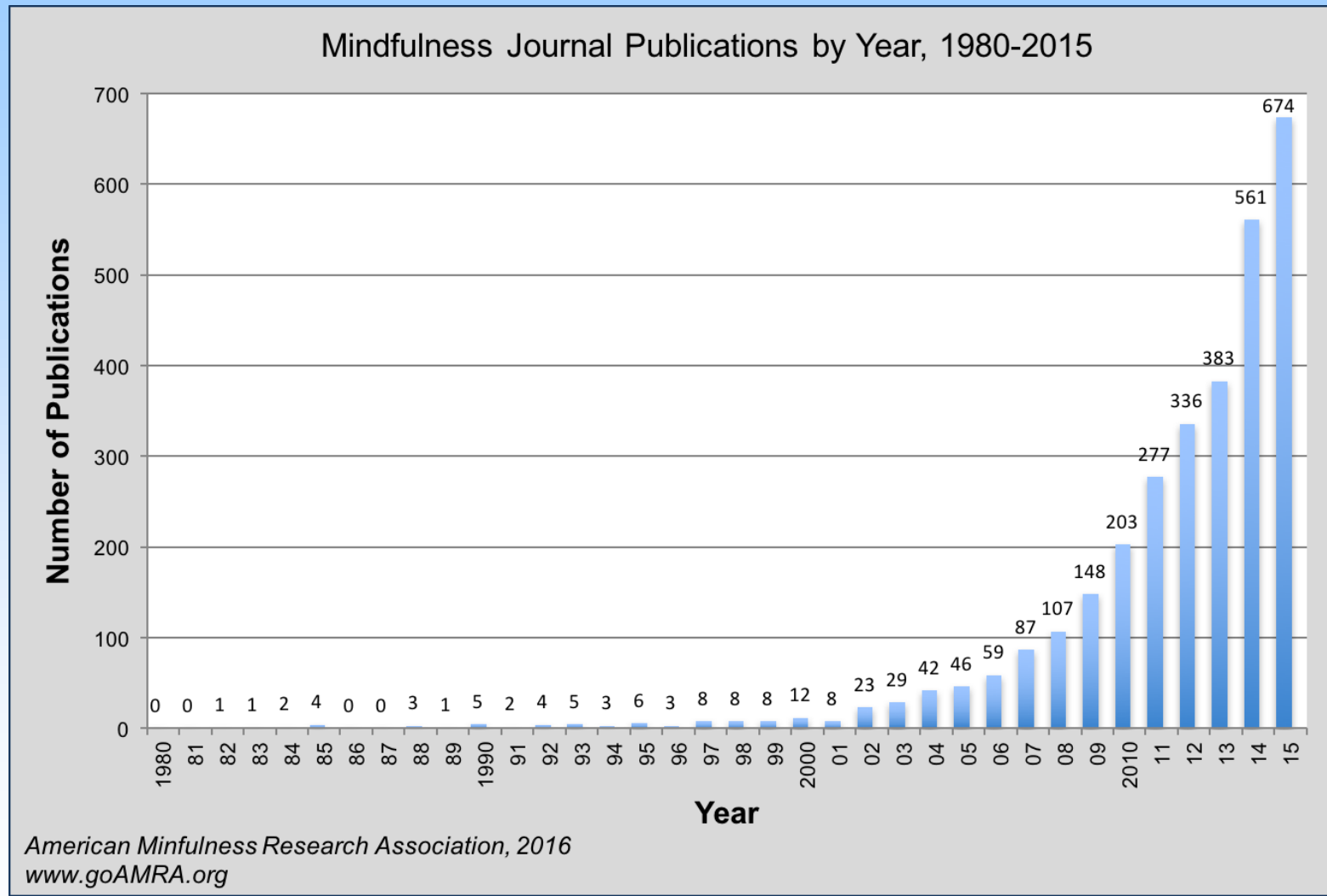
# Mindfulness-Based Stress Reduction

- Program developed in late 1970's by Jon Kabat-Zinn and colleagues at the UMass Med Centre, Worcester
- Combines stress reduction with mindfulness meditation techniques
- MBSR has been shown effective for a wide range of physical and psychological disorders and symptoms: see <https://goamra.org/> for comprehensive research summaries





# Mindfulness research studies



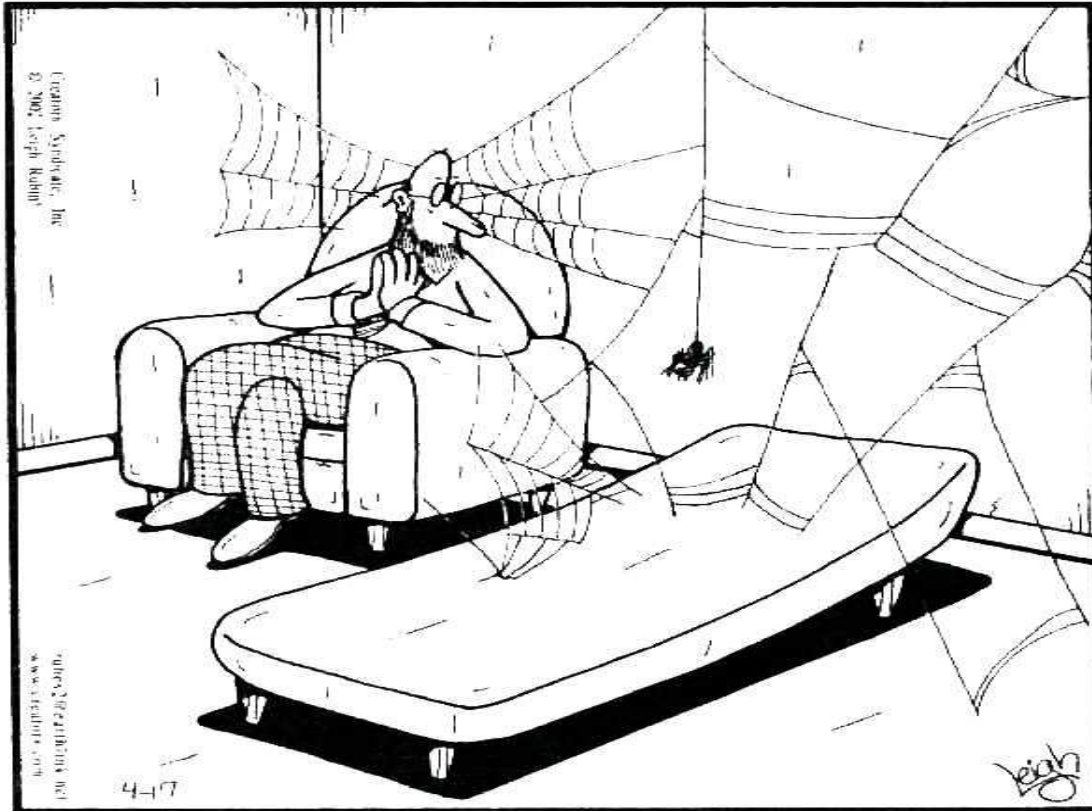
# Mindfulness-Based Cancer Recovery



# The cancer experience

RUBES®

By Leigh Rubin



"My life's a mess, Doc. Ya gotta help me! I just seem to be spinning out of control!"



# The cancer experience

- Life threat/mortality – impermanence and death
- Loss of control – letting go/non-attachment
- Loss of certainty (predictability/routine)
- Grief, fear, anger, depression
- Symptoms: pain, fatigue, sleeplessness
- Fear of recurrence



# Tom Baker Cancer Centre Program

- Clinical program developed in 1996 by Michael Speca, Maureen Angen and Eileen Goodey
- Based on personal yoga/meditation practices
- Refined based on the UMass Model ~ 1998

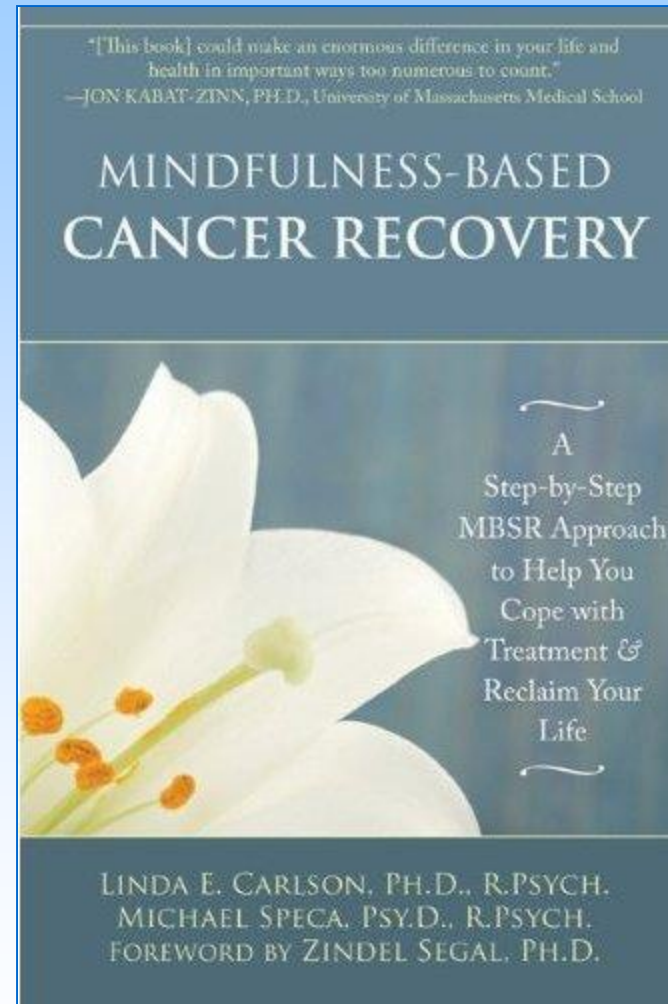


- Open to cancer patients and family members
- 2,500 participants
- Ongoing clinical program with research studies embedded



# Book: Mindfulness-Based Cancer Recovery

- Carlson & Speca
- Published Feb 2011
- Patient-centered
- Covers full MBCR curriculum with detailed exercises



# Program Design

- 9-week intervention
  - 1.5-2 hour weekly meetings with 2 instructors
  - Discussion followed by mindful yoga and meditation (body scan, sitting, walking)
  - Follow booklet which outlines the program/ includes a bibliography
  - Daily meditation practice encouraged and monitored -formal and informal (CD provided)



- Homework log of time spent in meditation
- 6-hour silent “retreat” between weeks 6 and 7



# Program Components

- Mindfulness – overarching theme
- Relaxation – abdominal breathing
- Gentle yoga
- Mind-body connection
- Visualization/Imagery
- Cognitive Coping Strategies
- Personal Empowerment
- Social Support



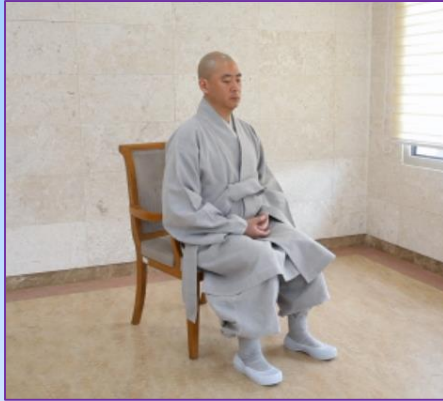


# Weekly Themes

1. Orientation
2. Introduction to Mindfulness
3. Mindfulness Attitudes
4. Mindbody Wisdom and Healing (stress responding vs. reacting)
5. Balance (breathing)
6. Mindful Coping
7. Cultivating Beneficial States of Heart and Mind (Imagery)
8. Deepening and Expanding
9. Moving into the World



# Types of meditation practices in MBCR



- Body scan
- Sitting
- Walking
- Open awareness
- Mountain/lake
- Loving-kindness



# Research Results



# Research results...

- Improved **symptomatology**
  - Stress symptoms
  - Mood, anger, anxiety, depression
  - Sleep, fatigue
  - Rumination, worry
- Improved **psychological well-being**
  - Quality of life
  - Spirituality
  - Post-traumatic growth
  - Overall mindfulness
- Improved **biological functions**
  - Decreases in systolic blood pressure
  - Normalized cortisol rhythms
  - Less inflammation
  - Maintains Telomere Length



-Over 40 publications;  
see [www.lindacarlson.ca](http://www.lindacarlson.ca)



# MBCR program research: Study 1

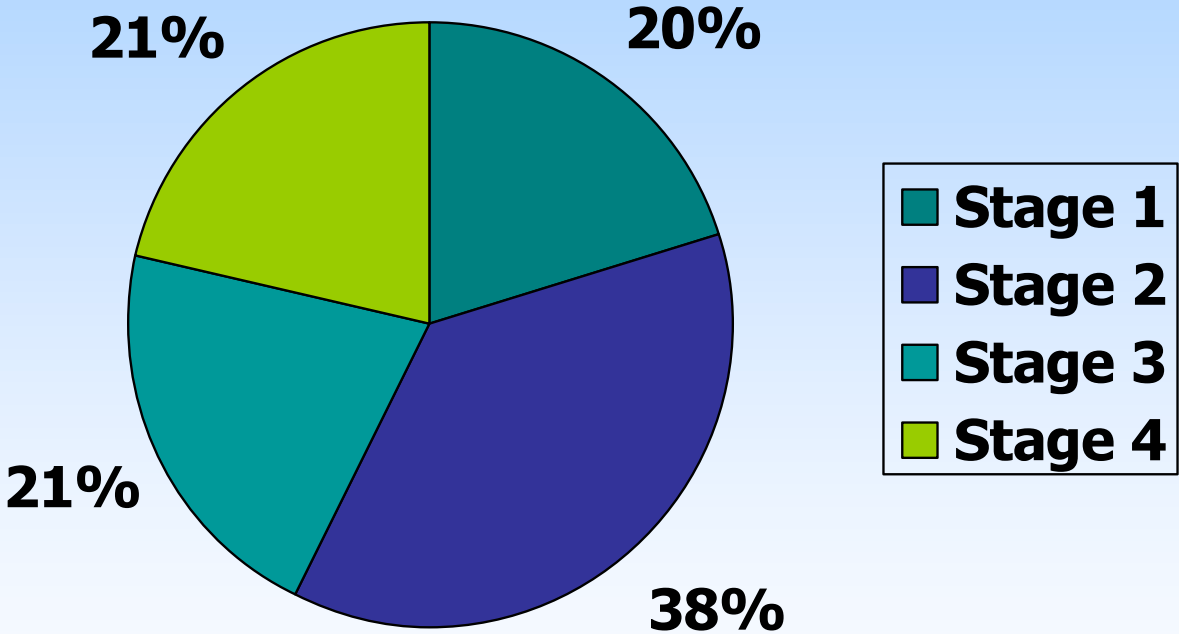
- Randomized controlled trial
  - 89 patients with mixed cancer diagnoses
  - On or off treatment
  - Assigned to MBCR or wait-list
- Focus on symptoms of stress and mood disturbance



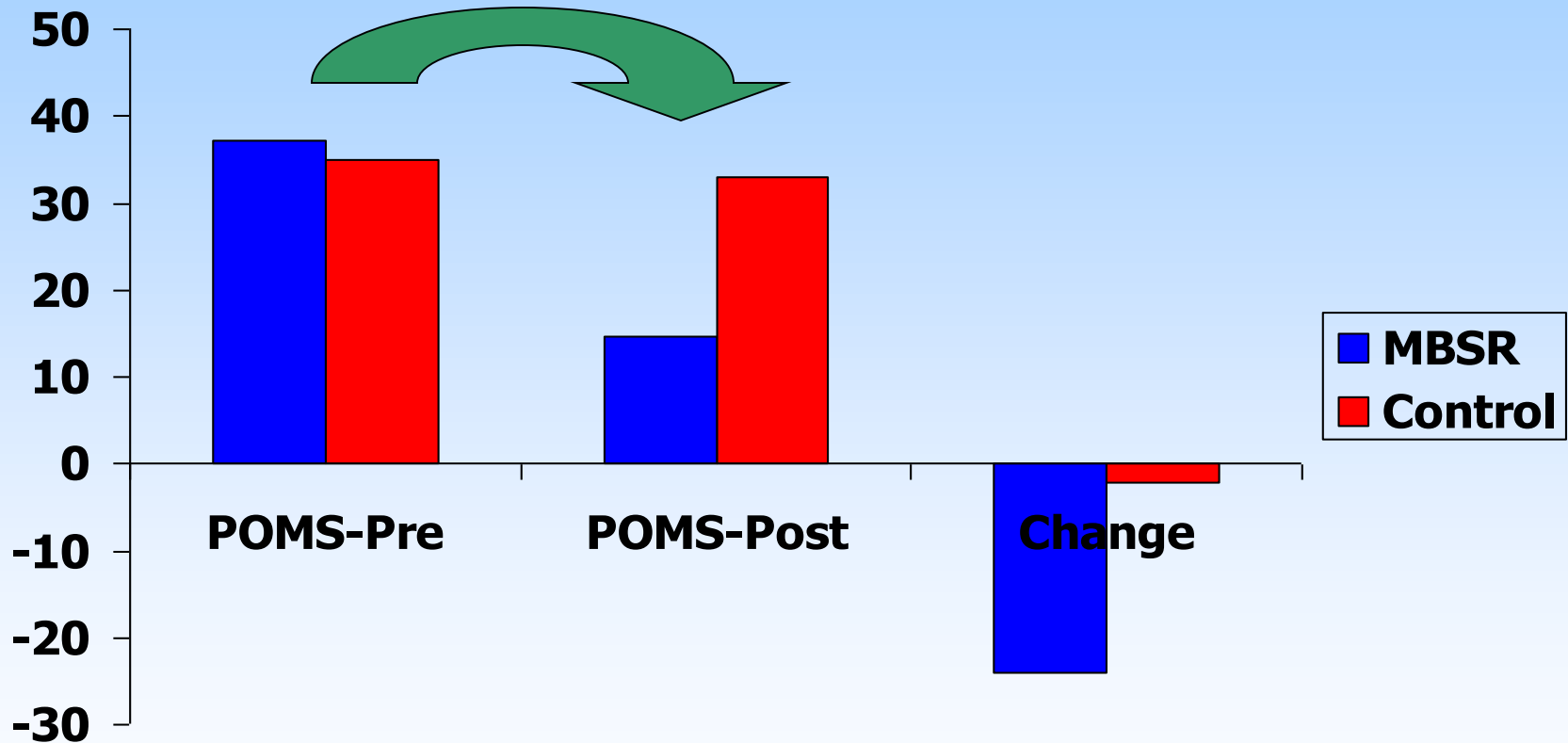
Specia, M., Carlson, L.E., Goodey, E. & Angen, M. J. (2000). *Psychosomatic Medicine*, 62, 613-622.



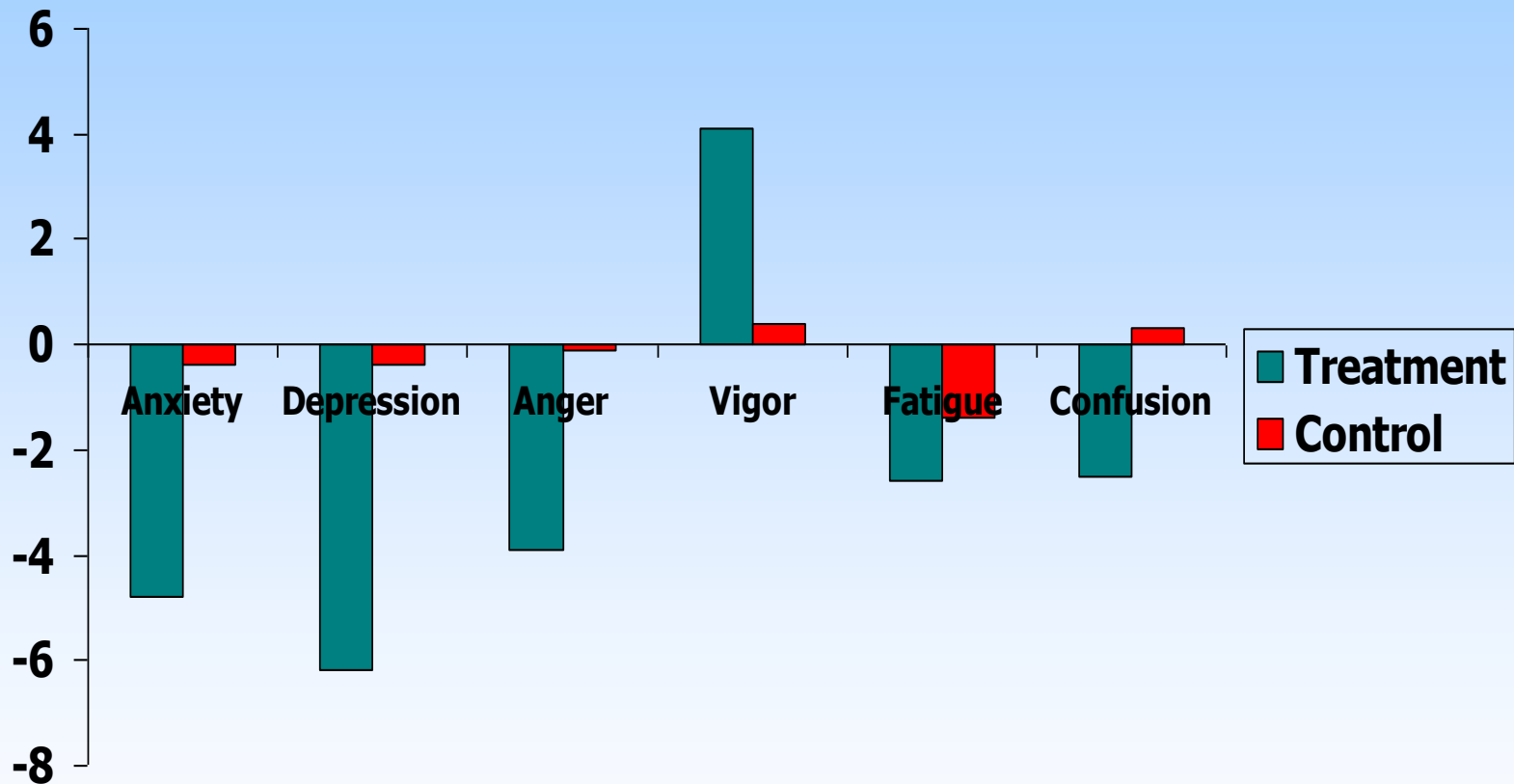
# Stage of Cancer - Both Groups



# Profile of Mood States - Total Mood Disturbance

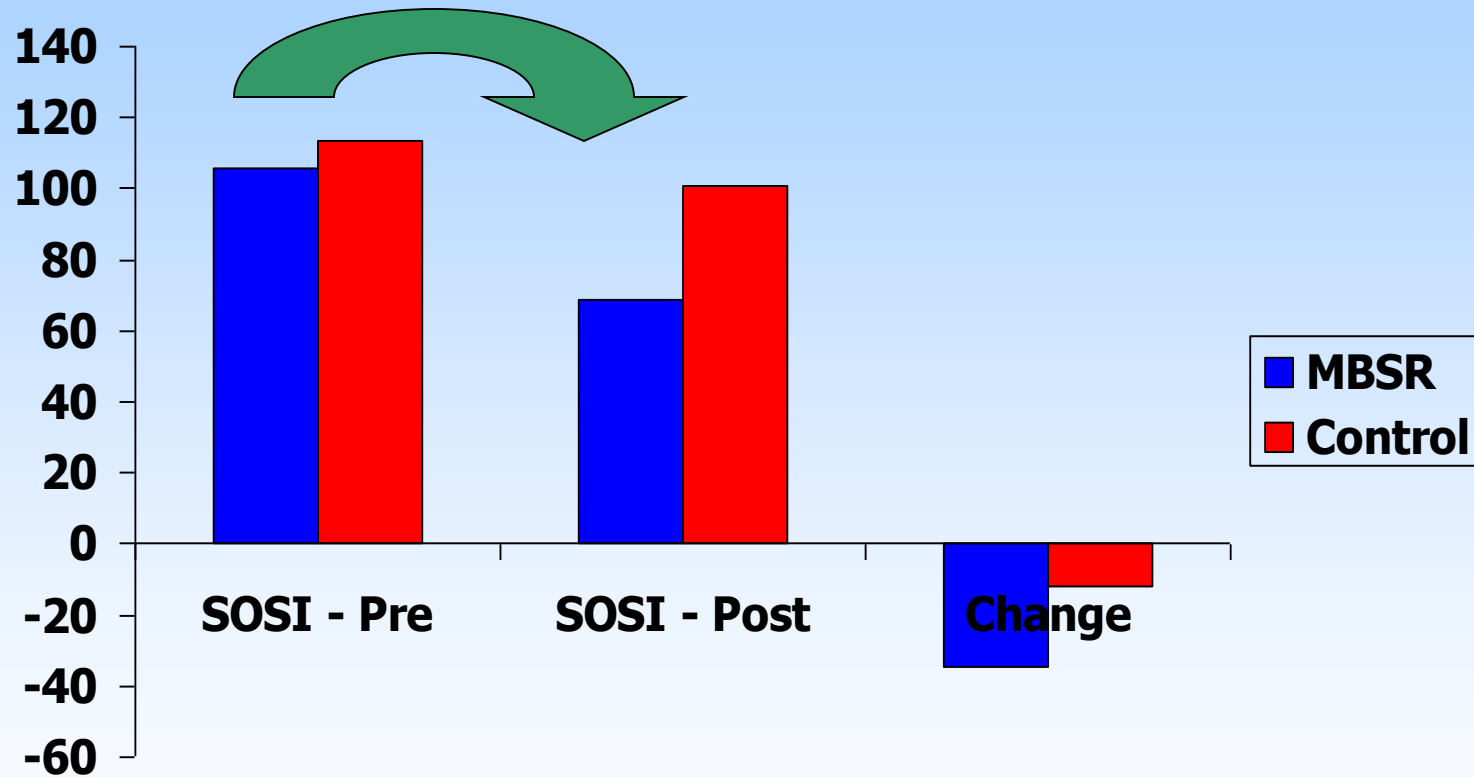


# POMS Subscale Change scores

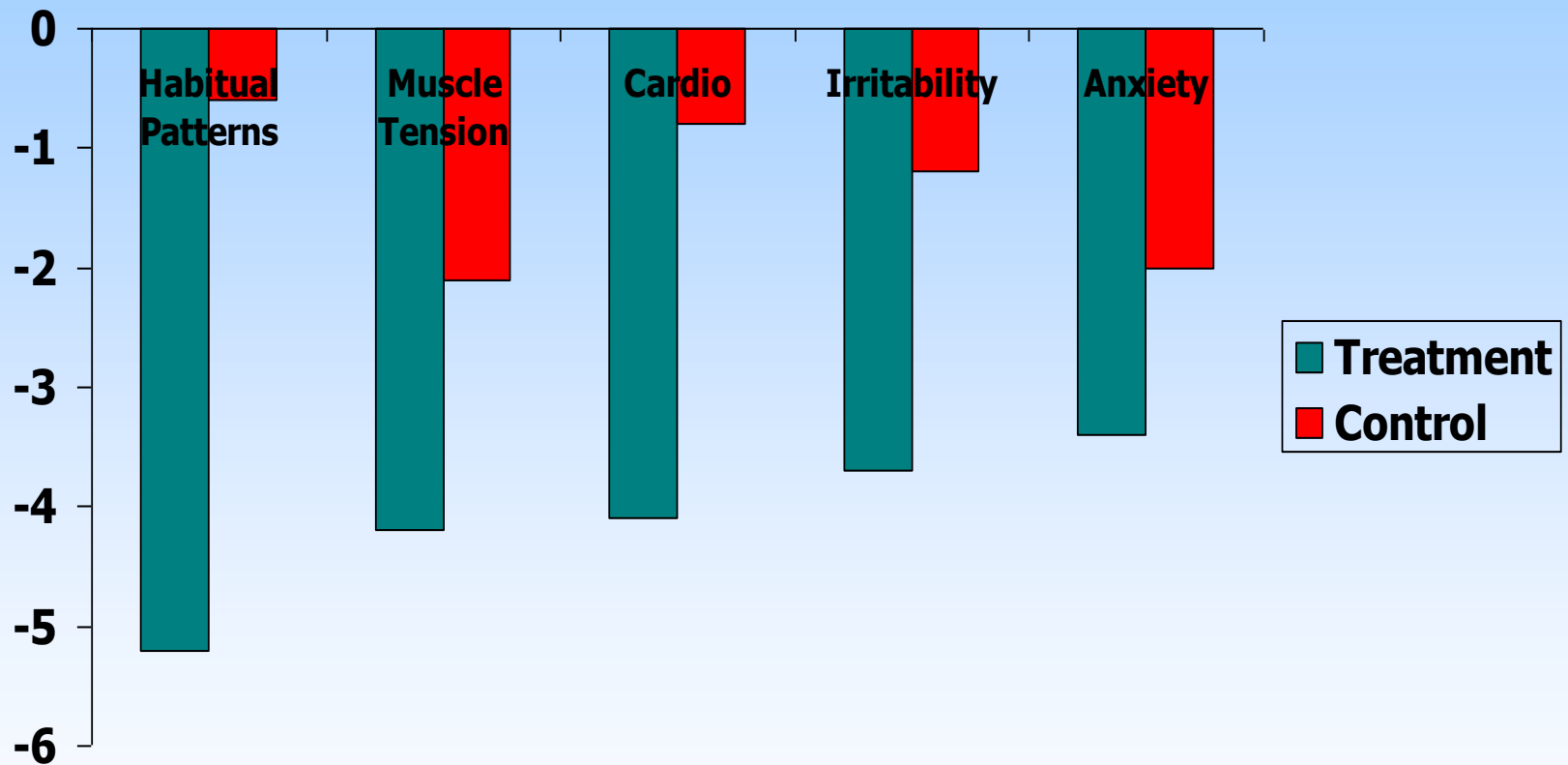




# Symptoms of Stress Inventory Total Symptom Score



# SOSI Subscale Change Scores

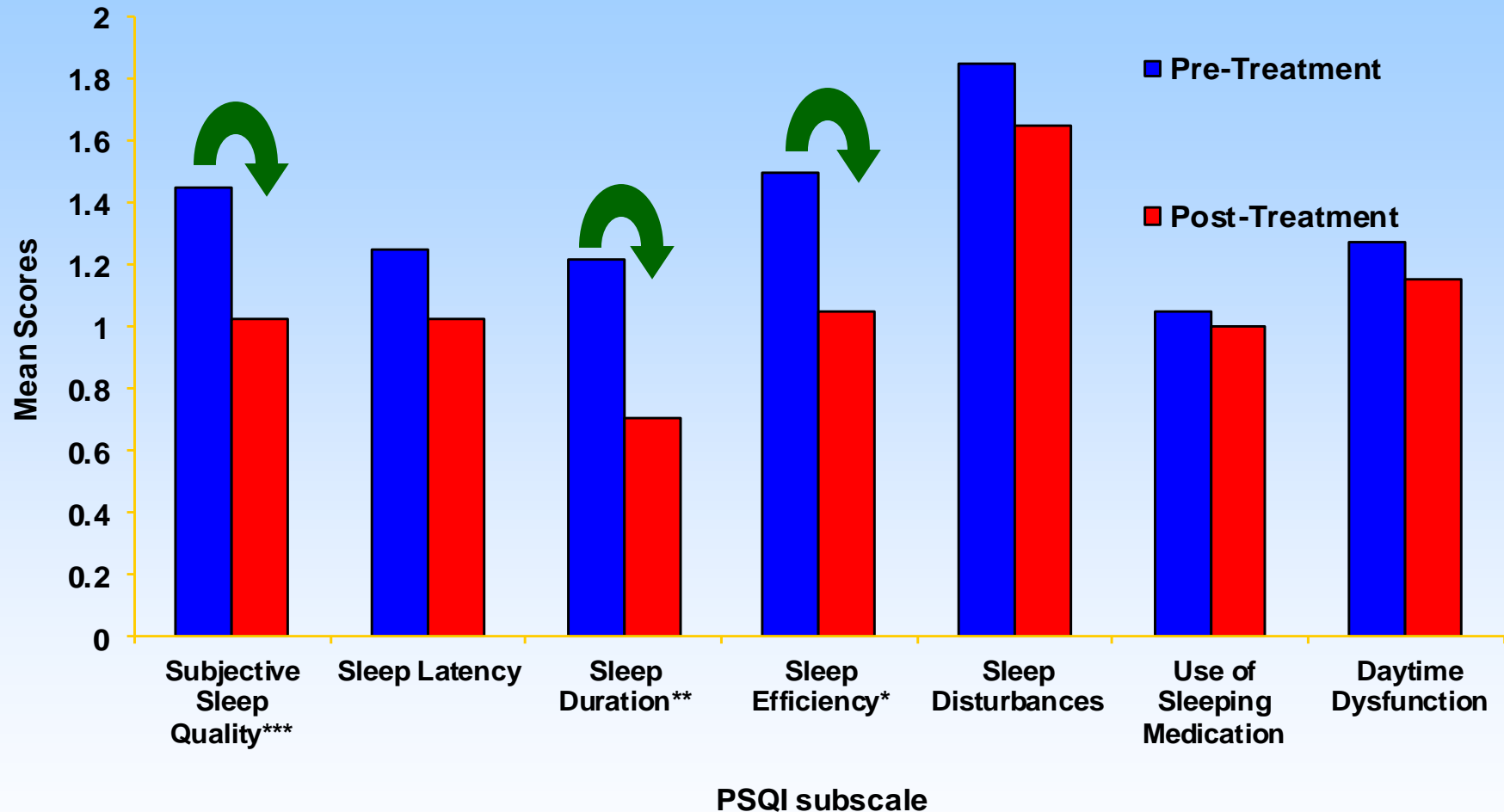


# Sleep outcomes

- Mixed sample of 63 Cancer patients
- Variety of dx, on and off treatments
- Improvements in a variety of sleep measures (Carlson & Garland, 2005)
- Improvements in stress, mood and fatigue levels



# Pittsburgh Sleep Quality Index



# Positive Outcomes: Post-traumatic growth



- Based on observation that often traumatic events have a “**silver lining**”. Also called “benefit finding”
- Trauma can lead to re-evaluating one’s place in the world
- Trying to make sense of “why me?”
- Gives people pause to reconsider what is important to them in life
- Renewed focus on things that bring authentic happiness
- PTGI subscales: Relating to Others, Personal Strength, New Possibilities, Spiritual Change, and Appreciation of Life



# Spirituality

- Distinct from “religiosity”
- Connection with something larger than oneself
- A sense of community and connection with others
- Feeling strength and comfort from one’s connections
- A sense of meaning and purpose in life
- an overall sense of harmony and peace
- FACIT-Sp subscales:
  - Meaning and Peace
  - Role of faith in illness



# Qualitative Grounded Theory Study

- Interviewed long-term MBSR participants
- 7 females and 2 males
- 43-77 years in age (average age 60.8 years).
- Active in the drop-in group for between 1 and 6 years (average time 2.8 years).
- Individual interviews followed by focus group
- Data analyzed using Q6 Nudist and grounded theory approach



Mackenzie, M., Carlson, L.E., Munoz, M. & Speca, M. (2007). A qualitative study of self-perceived effects of mindfulness-based stress reduction (MBSR) in a psychosocial oncology setting. *Stress and Health*, 23, 59-69



# Shifting Paradigms

- The 8-week group – a beginning

*The benefit for me has come in the long term. Things keep happening, little bits here and there. The 8-week program was just a start.*

- Actively searching for ways to deal with treatment and recovery

*My motivation was there was no treatment left for me. I felt I'd better figure out how to cope with this disease. Meditation was what I thought I had to do.*

- Seeing things in a new way – new possibilities

*This whole notion of embracing change as the constant, I'd never really thought of it that way before.*

- Making changes in lifestyle and attitude

*I've learnt it's not about form. It's not about doing things perfectly. It's just about connecting with others and our selves.*





# Self-Regulation

- Tools for coping with stress

*You don't have any control over what happens, but you have some control over how you deal with it.*

- Internal versus external control

*I was under the impression I could control most things. That was completely blown out of the water with a cancer diagnosis, which left me paralyzed. Meditation gives me time to look within. By looking within, that gives me control.*

- Participation in one's own recovery

*Do I think my chances are better because I'm eating differently, meditating and doing yoga? Yes, I think my chances are good.*



Less reactive response set – emotional control

*When things really start getting me down, I'll just stop and do some meditation. It really takes me over that hump: I can go on..*



# Group Cohesiveness

- Sense of community - belongingness

*I had been afraid of coming up to this building for a long time. All of a sudden, I was being welcomed to this building. That was quite beautiful.*

- Sharing common/collective experience

*It's a very powerful experience sitting in a circle of people who have been affected by cancer...*

*I find in it a very profound understanding because we all share a similar experience...*

*You're constantly reminded of your own humanity and the humanity of others.*



- Sharing difficult experience

*It's about life, right in that circle, right in that room. It is every part of living and dying; breathing, giving and sharing.*

- Sharing practice

*There seems to be a greater energy when a group of people come together and meditate.*



# Personal Growth

- Lessening of cancer as part of identity

*I'm not feeling my cancer is growing, it's becoming less and less. It's secondary. I'm looking at the positive aspects of becoming healthier, maybe even healthier than I was before.*

- Change in perspective

*Cancer can make a person very bitter or it can make them very wise. I'm not crazy about having had cancer but it has certainly done a lot in my life.*

- Developing feelings of meaning and gratitude

*How did I make a switch from being negative to positive in dealing with cancer? It was gratitude.*

*Meditating, in my own limited experience, gave me the chance to give the chaos some kind of meaning.*

- Change in the relationship to oneself – knowing oneself better

*It's changed my outlook on life, my relationship to other people and, most importantly, my relationship to myself. A person has to go inside and find out who they are, what their motivating factors are and what is good for them.*



# Spirituality



*Whenever I find that I'm really bogged down I go and I meditate. I've become a lot more spiritual.*

*I would say, to use a cliché, it is about spirituality. What is the definition of spirituality. It's about your connection. You're connected to something outside of yourself.*

*this is exercise of the spirit...You come for not only learning how to connect more with yourself, but you're also connecting with other people who understand the pain.*

*It's wise, there's this universality about it. You don't have to come from a certain faith tradition to take some of these things away.*



# eCALM: e-Therapy for Cancer Applying Mindfulness

## Online MBCR Program for Underserved Cancer Patients in Alberta: A Randomized Waitlist Controlled Trial

Zernicke, Campbell, Specca, McCabe, Flowers, Carlson,

- Randomized waitlist controlled trial (N = 64) to evaluate an online synchronous MBCR program - provided through [eMindful.com](http://eMindful.com)
- Primary outcome: **Feasibility** - whether individuals with cancer are willing to participate and complete the online MBCR program
- Secondary outcomes: **Questionnaires** - mood disturbance, symptoms of stress, mindfulness, spirituality and posttraumatic growth
- Powered to determine total mood disturbance and effect sizes for larger RCT



# Online MBCR screenshot

File Edit Share View Audio Participant Session Breakout Help

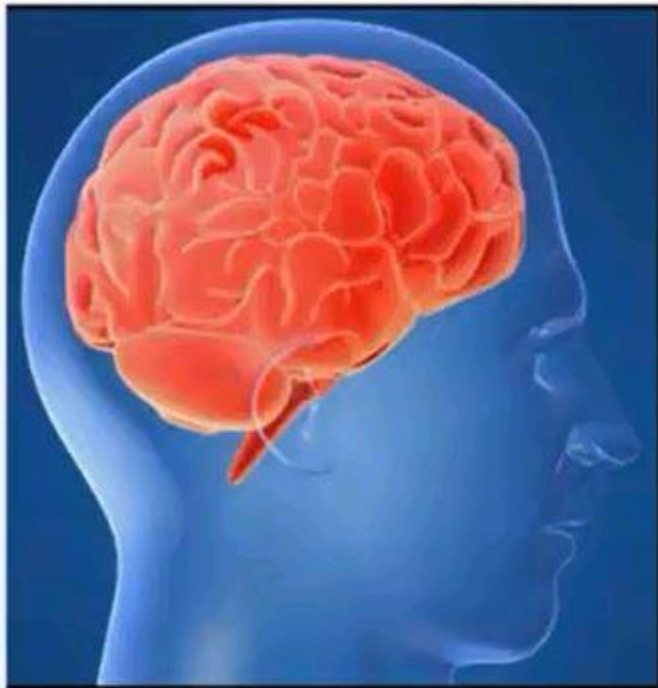
Quick Start

Session Info

Introduction t...

08

**Your emotions arise from your interpretations of situations –  
(the stories you tell yourself about what's happening)**



**Whether you are filled with awe or fear, kindness  
or resentment depends a lot on  
how you look at things.**

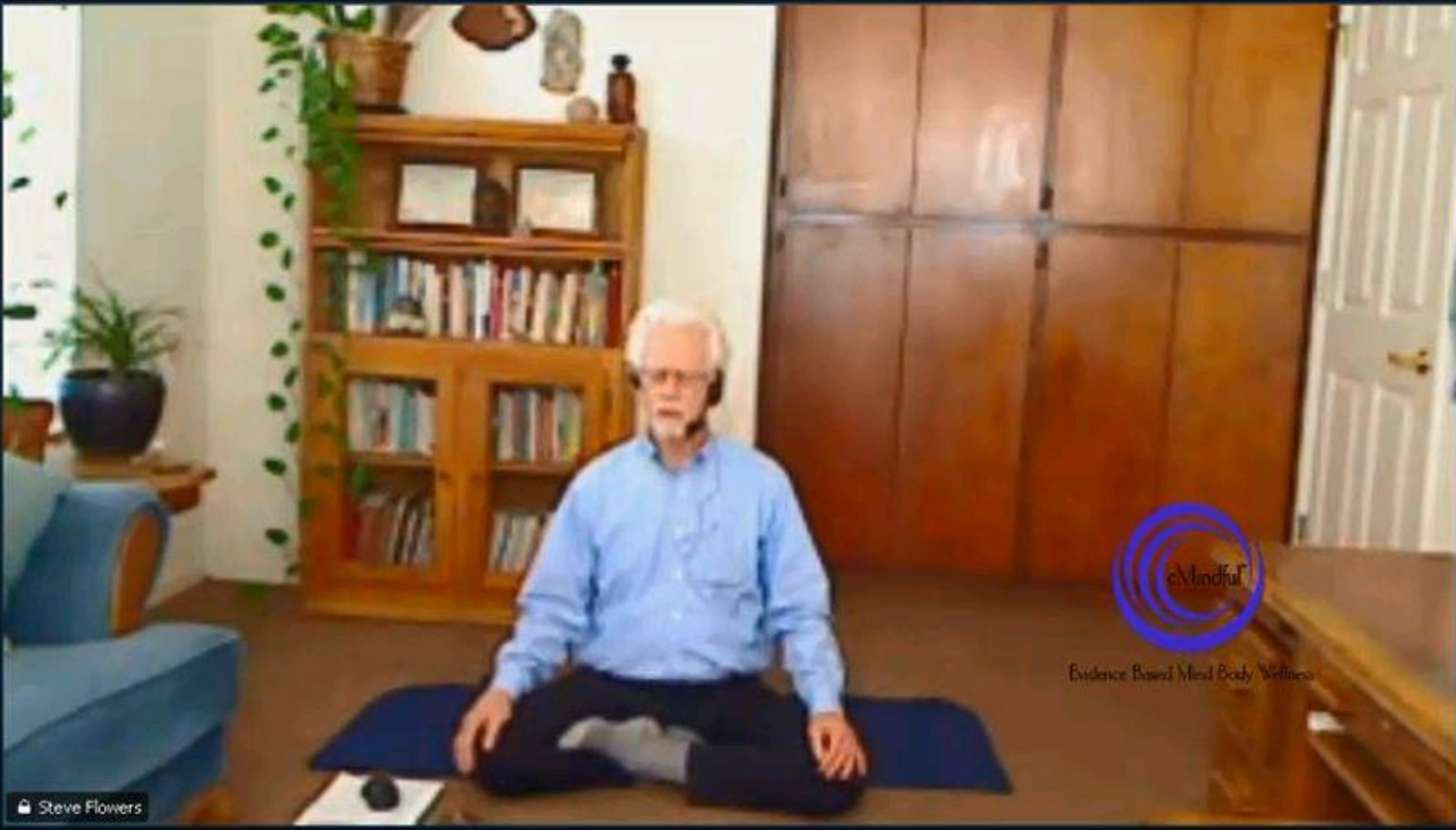
Participants

Chat



Evidence Based Mind Body Wellness

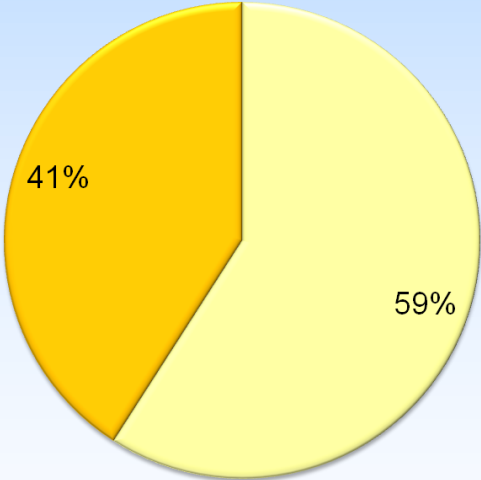
Full Screen 78% View



# eCALM Satisfaction Results

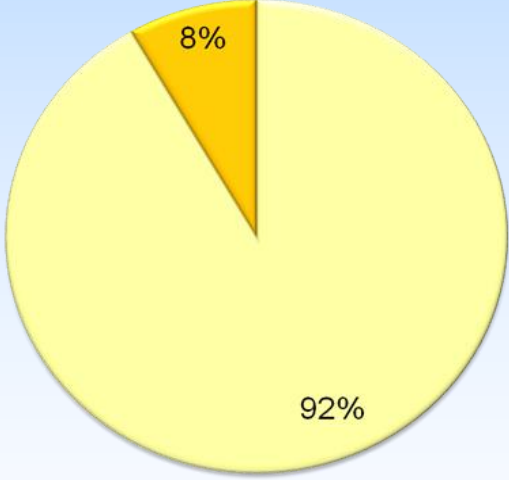
## Online MBCR Program Satisfaction

- Positively Surprised: Exceeded Expectations (n=13)
- Satisfied: Met Expectations (n=9)

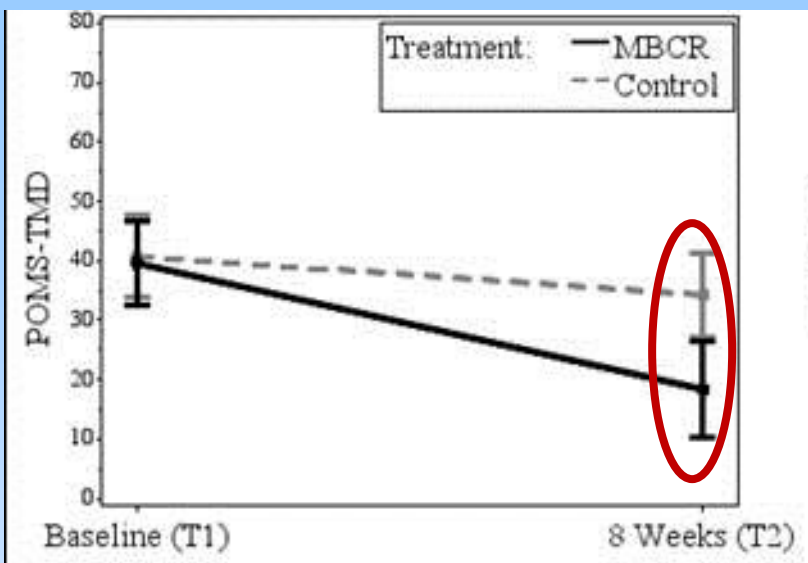


## Recommend Online MBCR to Other Cancer Patients

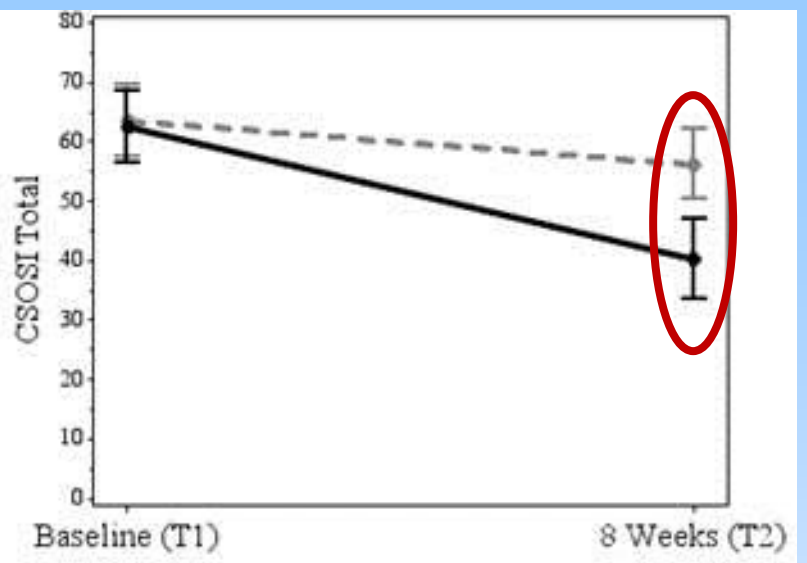
- Recommend Program (n=22)
- Recommend with Reservations (n=2)\*



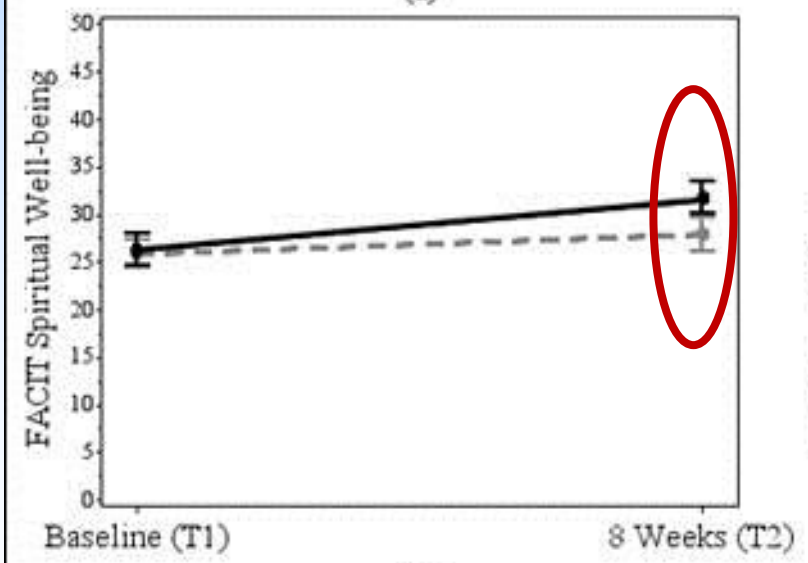




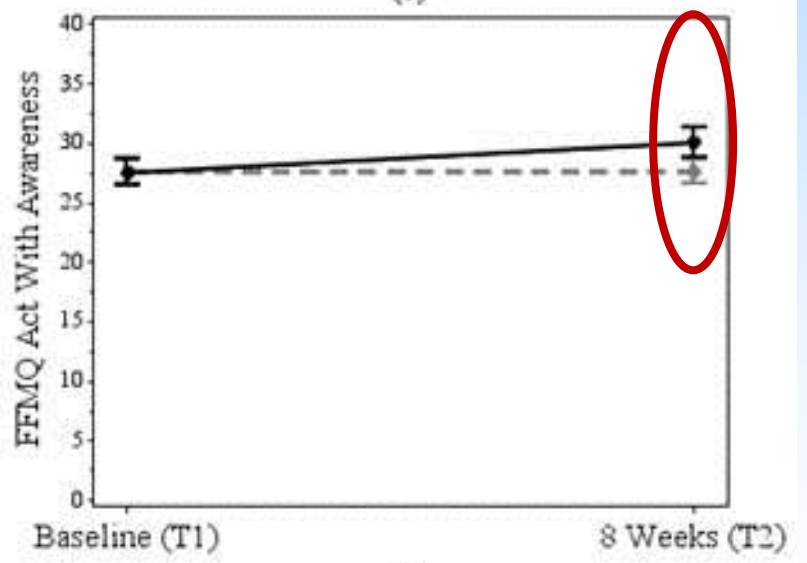
(a)



(b)



(c)



(d)



# eCALM Patient Quotes

- Being able to access this course online was a huge benefit in terms of my energy level. Because I am still in treatment, driving to another location can be taxing on my energy, I was able to **conserve my energy strictly for the course and content**. Also setting up this time and location at home made it **easier on non-course days to keep up with the program** and practices since I was already comfortable in my home environment.”
- “Meditation and Body Scan was extremely helpful during my first Radiation Therapy as I calm my fears and emotions. **I do it every day during my treatment** as I lay on the treatment table and just become aware of my surroundings when they tell me that my treatment is done. GOOD TIMING and thank you.”



# eCALM patient quotes

- “I truly appreciate having had the opportunity to participate and will definitely incorporate mindfulness (and yoga and meditation) in my daily life - to enhance my quality of life and contribute to my ongoing experience of **living with cancer versus dying of cancer.**”
- “I believe this program has **changed my life** and given me tools to live successfully no matter what happens. Practicing is a work in progress, but I am getting much better at not reacting, not letting my feelings and thoughts overwhelm me, etc. and I have great faith that practicing mindfulness will not only see me through, but build my resilience too.”



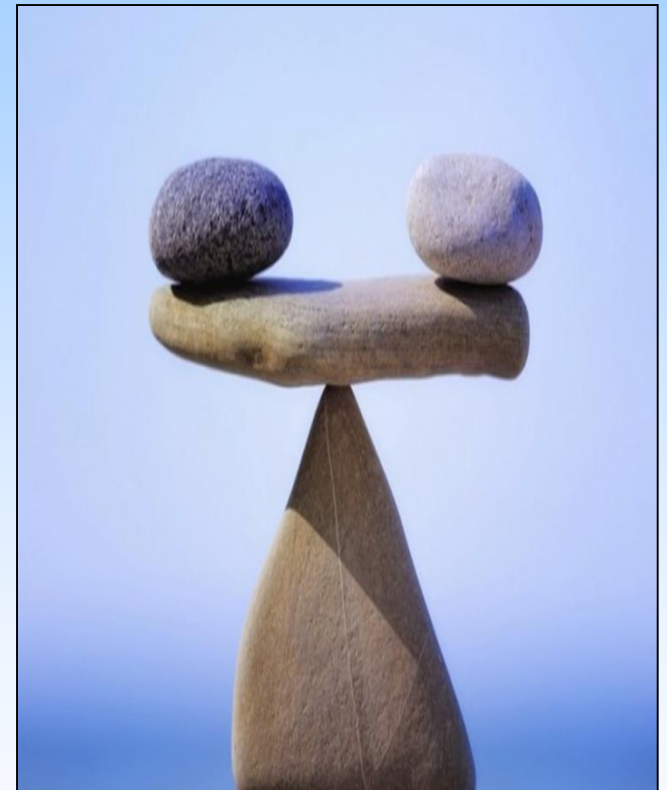
# eCALM Patient Quotes

- “I was **somewhat hesitant** at the beginning of the course because I am not a touchy/feely type person, and had reservations about yoga and meditation, although I had very little actual experience with either. I found that I really enjoyed the sessions, and in many aspects, the **weekly sessions were a highlight of my week.**”
- “I felt a sense of wellbeing when involved with the program, and I think that the fact the group was from all over Alberta, and that we would unlikely run into each other was a positive thing--**didn't have to worry about someone in the group talking to other people that I know or work with.**”
- “Thank you! MBSR is a great practice to share any way we can. In a post cancer phase, accessing the course online is great, one less outing. The online format works. It held, for me at least, **just the right amount of contact and closeness** for me to be comfortable. I truly appreciate the graceful and loving way the course was conducted as well as the gentle reminders and patience extended me.”



# Summary of our research

- MBCR program improves mood, stress symptoms, sleep
- Program leads to feelings of enhanced spirituality and benefit finding
- Learning in a group enhances outcomes
- Online versions also have similar benefits





# Contact Information

- Tom Baker Cancer Centre Integrative Oncology program:
  - [www.tbccintegrative.com](http://www.tbccintegrative.com)
- Website: [www.lindacarlson.ca](http://www.lindacarlson.ca)
  - pdf files of publications
  - Username: publications
  - Password: Carlson
- Phone: 403-355-3207
- E-mail: [l.carlson@ucalgary.ca](mailto:l.carlson@ucalgary.ca)

