

Humor, Medicine, and Resilience

Amish J. Dave, MD, MPH

Virginia Mason Franciscan Health

Disclosures

- None

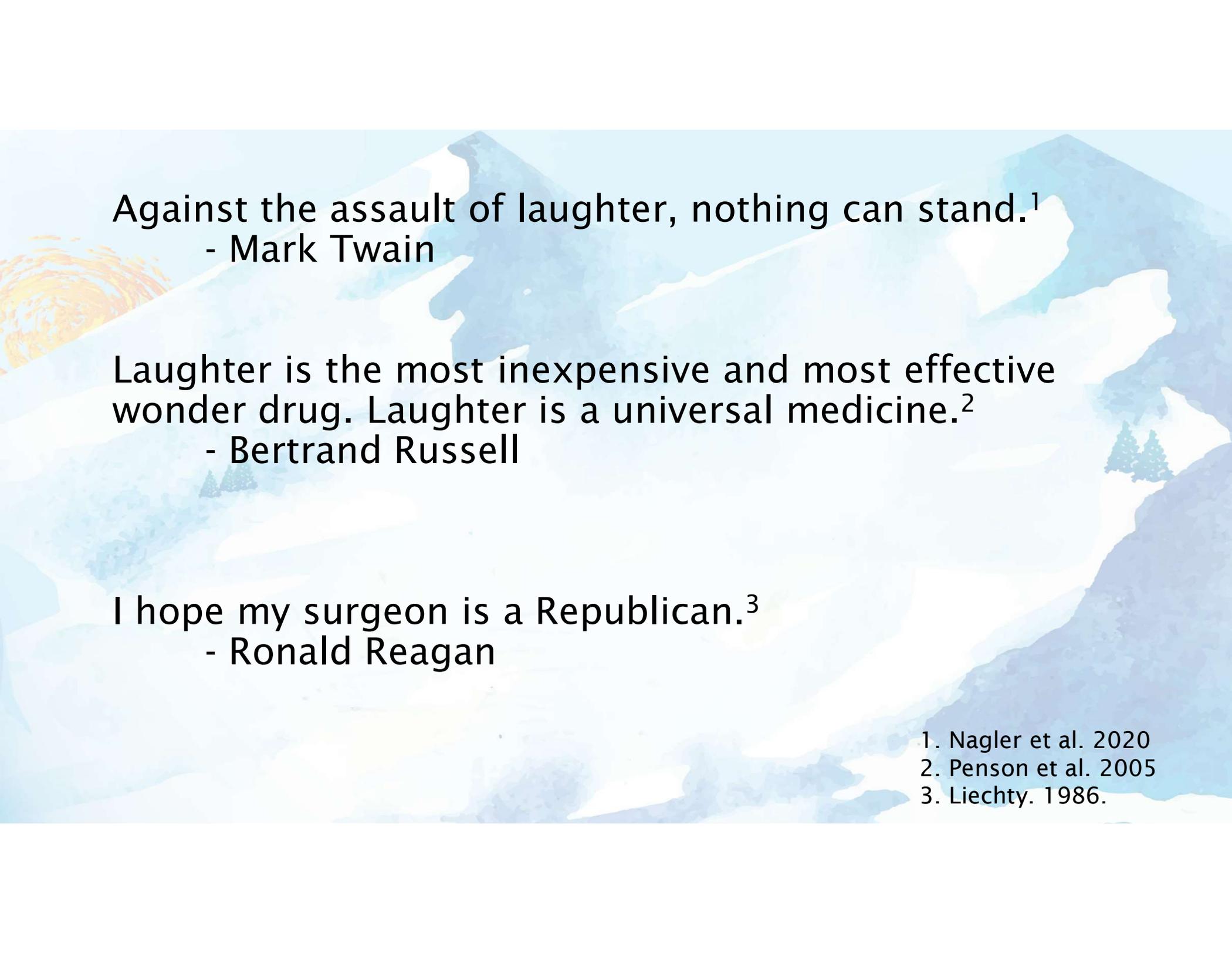


My mom the historian



Learning Objectives

- Define humor and explain the physiology of humor
- Review types of humor
- Discuss situations in which humor is appropriate and inappropriate
- Explain the role of humor in improving wellness and resilience in healthcare and workplace settings.



Against the assault of laughter, nothing can stand.¹
- Mark Twain

Laughter is the most inexpensive and most effective wonder drug. Laughter is a universal medicine.²
- Bertrand Russell

I hope my surgeon is a Republican.³
- Ronald Reagan

1. Nagler et al. 2020
2. Penson et al. 2005
3. Liechty. 1986.

Definitions of Humor

- Something that is, or is designed to be, comical or amusing¹
- The study of humor is gelotology (Greek: *gelos*, or laughter)
- The study of humor is limited by different forms of humor, as well as individuals' education status, gender, sex, nationality, trauma/life experiences, and religion

Definitions of Humor

- Humor is a “personality-based cognitive emotional style of processing situations, characterized by the ability to find positive aspects even in negative situations, and the ability to communicate this point of view to others and to cheer them up.”
- Humor reduces the risk of burnout. It can be taught. Humor can be trained.

Humor is actually rather difficult to define and understand

- Humorous communication increases feelings of happiness and laughter in those responding to it
- Humor is present in any social situation
- The nature of what is perceived as amusing varies widely among individuals, societies, and cultures
- Humor and laughter are not synonymous. While laughter is almost always positive, humor itself can provoke mixed emotional responses.

Queen of the selfie



8 Comic Styles in 2 styles (light and dark)

- Lighter styles
 - 1. Fun – spreads good mood and good comradeship (Falstaff)
 - 2. Benevolent – arouses sympathy and an understanding for the incongruities of life, the imperfections of the world, the shortcomings of fellow humans (Jane Austen)
 - 3. Nonsense – exposes the ridiculous and playing with unresolved incongruities (Alice in Wonderland)
 - 4. Wit – humorous remarks with “a surprising punch line that uses unusual word combinations created on the spot (Oscar Wilde)

8 Comic Styles in 2 styles (light and dark)

- Darker styles
 - 5. Irony – create a mutual sense of superiority towards others by saying the opposite of what is meant (Guy de Maupassant)
 - 6. Satire – humor that improves the world and corrects wrongdoing through ridicule (Nikolai Gogol or Jonathan Swift)
 - 7. Sarcasm – using humor to hurt others
 - 8. Cynicism – “devaluing commonly recognized values” through negative comments or mockery (Archie Bunker)

Proyer et al 2020
Ruch et al 2018

Light versus dark styles of humor

- Fun or good-hearted humor is contagious and has a positive impact on other people's moods
- Benevolent humor can facilitate social interactions and build social bonds
- Irony and satire help healthcare workers cope with stressors and facilitate interactions with patients
- Sarcasm and cynicism are very difficult to use in healthcare settings, BUT they can help patients cope with adversity

Proyer et al 2020
Ruch et al 2018

Laughter

- Each person's laugh is unique and is an expression of happiness involving (1) typical facial movements and (2) contractions of the respiratory muscles.¹
- Laughter is the opposite of crying, and there is a neuroanatomical circuitry for the production of laughter.¹
- Six neurological diseases with inappropriate laughter: multiple sclerosis, amyotrophic lateral sclerosis, Alzheimer's disease, pseudobulbar palsy, Wilson's disease, and kuru.²

1. Penson et al. 2005

2. Liechty 1987

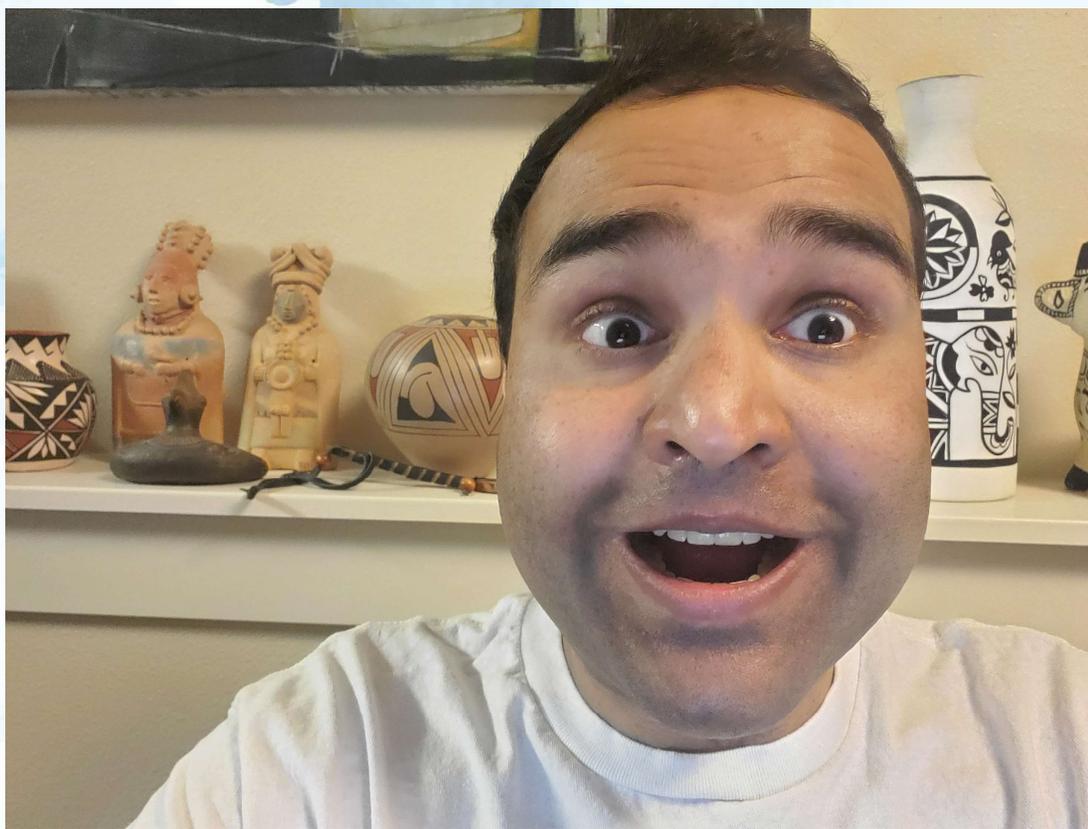
The Anatomy of Laughter

- Anterior cingulate gyrus (under frontal cortical control): provides emotional consciousness to an individual's experiences
- Caudal hypothalamus: center of coordination for emotional changes, including laughter
- Temporal lobe-amygdala structures: (1) provide emotional coloring to perceptions and (2) aid in humor comprehension
- Ventral pontomedullary center for laughter: coordinates facial expression, expirations, and emotional vocalization

Two Pathways for Laughter

- Involuntary pathway: emotionally driven” system involving the amygdala, thalamus, hypothalamus, subthalamus, and the dorsal brain stem
- Voluntary Pathway: originates in the premotor opercular areas and leads through the motor cortex and pyramidal tract to the ventral brain stem
- Both pathways and the laughter response are coordinated by a center in the dorsal upper pons

I thought we were going to laugh tonight?!?!



What are the Benefits of Humor

- Moderates the impact of stress life events on depression and anxiety
- Increases salivary immunoglobulin and improves the immune system
- Promotes a positive affect
- Lowers the blood pressure
- Decreases need for pain medications by decreasing pain
- Decreases stress hormones

Penson et al 2005
Sigman 2021

Short-term benefits

A good laugh has great short-term effects. When you start to laugh, it doesn't just lighten your load mentally, it actually induces physical changes in your body. Laughter can:

- **Stimulate many organs.** Laughter enhances your intake of oxygen-rich air, stimulates your heart, lungs and muscles, and increases the endorphins that are released by your brain.
- **Activate and relieve your stress response.** A rollicking laugh fires up and then cools down your stress response, and it can increase and then decrease your heart rate and blood pressure. The result? A good, relaxed feeling.
- **Soothe tension.** Laughter can also stimulate circulation and aid muscle relaxation, both of which can help reduce some of the physical symptoms of stress.

Long-term effects

Laughter isn't just a quick pick-me-up, though. It's also good for you over the long term. Laughter may:

- **Improve your immune system.** Negative thoughts manifest into chemical reactions that can affect your body by bringing more stress into your system and decreasing your immunity. By contrast, positive thoughts can actually release neuropeptides that help fight stress and potentially more-serious illnesses.
- **Relieve pain.** Laughter may ease pain by causing the body to produce its own natural painkillers.
- **Increase personal satisfaction.** Laughter can also make it easier to cope with difficult situations. It also helps you connect with other people.
- **Improve your mood.** Many people experience depression, sometimes due to chronic illnesses. Laughter can help lessen your stress, depression and anxiety and may make you feel happier. It can also improve your self-esteem.

The Mayo Clinic and Harvard

The Mayo Clinic

Sociologists (not *socialists*) on Humor

- Darwin – laughter has a social role and particular vocal expressions linked to internal emotional states may function to influence others
- Freud – humor is one of the strongest defense mechanisms and allows an individual to face problems and avoid negative emotions
 - Humor allows for distancing oneself from a situation, framing problems with perspective, and proactively managing distress

Research on Undergraduate Students

- Bachorowski and Owren studied 120 undergraduate students
- In a variety of social pairings when watching humorous movie scenes, students varied the number and kinds of laughter they participated based on the sex of the social partner and whether the partner was a stranger or a friend
- Laughter is a tool of social influence
- We use laughter to capitalize on listener sensitivities and to facilitate group bonding
- Laughter helps us form alliances

Penson et al. 2005

Philosophers on Humor

- “To become conscious of what is horrifying and to laugh at it is to become master of that which is horrifying...The comic alone is capable of giving us strength to bear the tragedy of existence.”
 - Eugene Ionesco

Philosophers on Humor

- Plato: learning and emotion are linked¹
- Soren Kierkegaard: humor is central to the understanding of moral psychology²
- Friedrich Nietzsche: created Zarathustra “the laughing prophet” to enthusiastically affirm life in the face of suffering, ambiguity, and death²
 - Learn to laugh at yourselves

1. Taylor 2020
2. Proyer et al 2020

Philosophers on Humor

- Immanuel Kant: laughter is “an affection arising from the sudden transformation of a strained expectation into nothing:
- Freud, Mindness, and Niebuhr – “liberation” or “freedom” theory – laughter response is a release from constraints and fears, from the many pressures (including death itself) that face us
- George Burns on his 90th birthday party: “I’ve lived an exciting life, and I expect the second half to be just as exciting.”

Smiling and Laughter



After a meeting with administrators

Smiling and Laughter

- A smile is used to communicate a “positive disposition”
- Smiles can show sympathy, social affinity, reassurance, or greeting
- Laughter emerges from a relaxed, open-mouthed display
- Human beings can fake a smile
- It is much harder to fake laughter – it is a more honest signal of interest in joining or working or being with other people

Laughter and Evolution (please don't shoot me Idaho folk)

- Laughter is an evolutionary device that can calm aggression, speed information transfer, and preserve social unity
- Laughter helps us form a common bond
- A study of 1200 incidences of naturally-occurring laughter in ordinary situations found that laughter

Stress, Humor and Coping

- Stress: a situation where the relationship between a person and their environment is perceived as a threat or a challenge
 - A new diagnosis of systemic sclerosis
 - A cancer diagnosis
 - So many things in medicine!

Primary appraisal: patients consider the impact of a stressor on their personal well-beings

Secondary appraisal: patients examine the resources available for coping

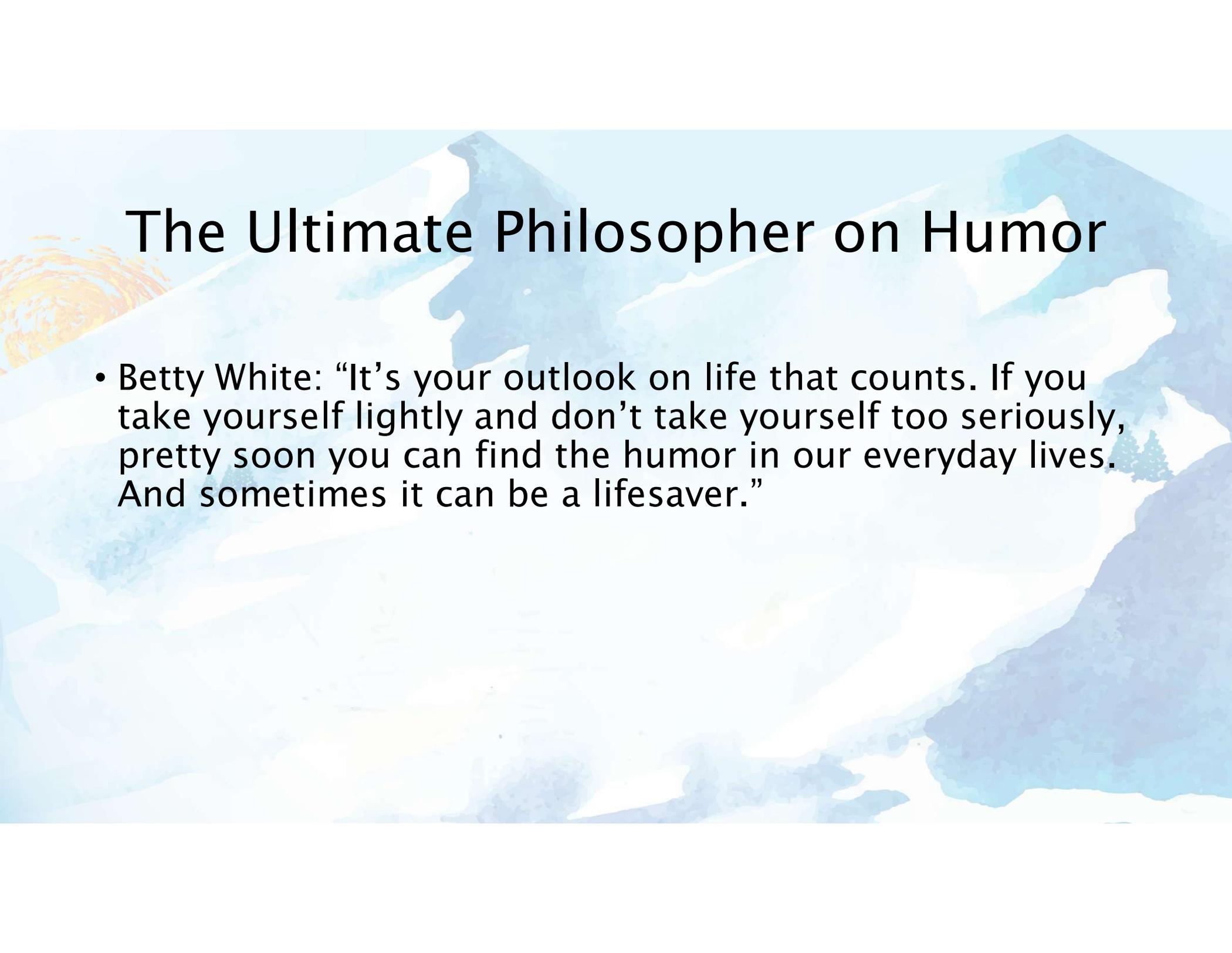
Humor is a potent defense mechanism in stressful situations

A Stressful Diagnosis



“The Humor-Sadness Connection”

- Sadness – and even tragedy – might underlie true humor
- Lord Byron: “If I laugh at any mortal thing, ‘tis that I may not weep”
- Abraham Lincoln: “I laugh because I must not weep, that is all, that is all.”
- Mark Twain: “Everything human is pathetic. The secret source of humor is not joy but sorrow.”
- Herman Melville: “I know not what is coming, but I go to it laughing.”

The background of the slide is a watercolor-style illustration of a mountain range. The mountains are rendered in various shades of blue and white, with soft, blended edges. On the left side, there is a bright, circular sun with orange and yellow rays. The overall style is artistic and serene.

The Ultimate Philosopher on Humor

- Betty White: “It’s your outlook on life that counts. If you take yourself lightly and don’t take yourself too seriously, pretty soon you can find the humor in our everyday lives. And sometimes it can be a lifesaver.”

Three Non-humorous...unfunny...anti-funny... Situations

- 1. When patients are seriously threatening not to cooperate with staff
- 2. When patients are extremely upset
- 3. When staff are interacting with the relatives of or visitors to dying patients
- Further research is necessary to explore family perspectives on humor, the effect of national and ethnic affiliations, and the influences of the overall environment upon humor itself

Penson et al. 2005
Joshua et al. 2005

Positive Aspects of Humor in Healthcare

- Humor helps us build deeper, more trusting relationships with patients
- There are psychological, communication, and social benefits to humor
- Humor can act as a leveling agent to reduce tension
- Oncology research shows there are two forms of humor used: (1) spontaneous repartee and (2) prepared or rehearsed humor

Mature Defense Mechanisms

- These help a person to adjust to an anxiety-provoking stressor in an adaptive and productive manner
- Humor
- Altruism
- Anticipation
- Asceticism
- Sublimation
- Suppression
- Humor lets patients psychologically distance themselves from their own illnesses or deaths

Joshua et al. 2005

Do we see humor like our patients do?

Use of humour in primary care: different perceptions among patients and physicians

M Granek-Catarivas, S Goldstein-Ferber, Y Azuri, S Vinker, E Kahan

Postgrad Med J 2005;81:126-130. doi: 10.1136/pgmj.2004.019406

Purpose: (1) To explore the frequency with which humorous behaviour and statements occur in family medicine practice in Israel, and (2) to quantitatively assess the correlation between the subjective perceptions of humour in medical encounters between patients and physicians.

Method: In a cross sectional study, two populations (doctors and patients) were surveyed with paired structured questionnaires completed immediately after primary care practice visits. Two hundred and fifty consecutive encounters from 15 practices were sampled. The physician questionnaire was self administered, and patient questionnaire was administered by a trained research assistant.

Results: A mean of 16.7 questionnaires was completed per physician (range 6-20). The physicians reported having used some humour in only 95 encounters (38%), whereas almost 60% of patients agreed with the statement, "The doctor used some humour during the visit". At the same time, for specific encounters, the agreement between patients' perception and physicians' perceptions on the use of humour, although not completely by chance ($p=0.04$), is low ($\kappa=0.115$). Patient characteristics (age, education, gender, family status, mother tongue, self perceived health status, stress, mood, and expectations) were not related to the degree of agreement between the patients' and physicians' perceptions.

Conclusion: Humour was used in a large proportion of encounters, independently of patient characteristics. Patients seem to be more sensitised to humour than physicians, probably because of their high stress level during medical encounters. Cultural differences may also play a part. Physicians should be made aware of this magnifying effect, and the issue should be discussed in medical schools.

See end of article for authors' affiliations

Correspondence to:
Dr E Kahan, 7 Arazim
Street, no 4, Kfar Sava
44456, Israel; ekahan@
post.tau.ac.il

Submitted 19 January 2004
Accepted 14 April 2004

Granek-Catarivas et al.
2004

Do we see humor like our patients do?

- 250 patients in 15 centers in Israel
- Physicians had no idea that goal of study was to study humor
- Patients filled out extremely long questionnaires
- Physicians reported using humor in 95 of 250 encounters (38%) and patients reported 60% of encounters used humor
- Authors conclusion: patients were more sensitive to humor due to high stress levels during medical encounters
- Of note: patients noted a lot of non-verbal humor

When not to use humor

- An overuse of humor by either the patient or doctor might be a mechanism to avoid sensitive issues
- Do not use humor at the first clinic visit
 - Trust is needed before making a joke and trust takes time and experience
- Do not use humor if there is not a therapeutic alliance between yourself and your patient
 - Patients might feel that jokes are being made at their expense
 - They might fear humiliation and stigma

How to use humor with patients

- Introduce humor slowly
- If a patient initiates the use of humor, it might be an invitation to help reduce stress or tension
- Invite patients to tell a joke themselves, or to give the punchline to a joke

Therapeutic Clowning

- Clowning is a multi-modal intervention that has been shown to benefit patients, their parents, and healthcare workers
- Clowns help children adept to their hospital surroundings
- They can help distract from or demystify painful or frightening situations or procedures
- Hospital or clinic settings can also consider use of a “humor cart”

Humor between healthcare workers: Gallows Humor

- Humor helps healthcare workers protect themselves from the harsh realities they face every day at work. It allows us to normalize the abnormal.
- Gallows humor – a form of humor that allows doctors to express a wide range of emotions such as grief, anxiety, guilt, disappointment, anger, and grief, in ways that they find acceptable
- Gallows humor is a coping mechanism for doctors in difficult situations, where negative feelings can be transformed into positive acceptance within the group and for themselves

Penson et al. 2005

Games of Chance

Transplant surgeons might play “games of chance” during operations, wagering about outcomes of risky behaviors.¹

Common joke among oncologists: “You know what they say about those stem cells, here today, gone to-marrow.”²

It is deemed acceptable by group norms and might be a method of socialization to affirm common values, teach, learn, and provide support.¹

1. Penson et al. 2005

2. Joshua et al. 2005

Humor by Patients

- “Applied” humor by patients:
 - Challenges assumptions others hold about the disease
 - Helps manage feelings
 - Helps hide embarrassment
 - Reduces tension
 - Allows for a sense of solidarity from others
 - Encourages others to examine themselves

One study of 14 terminally-ill cancer patients showed humor (1) established rapport, (2) promoted relaxation, (3) provided the distance to examine alternatives, and (4) evoked feelings of joy, lightheartedness, happiness, and hope

Penson et al. 2005
Joshua et al 2005

Humor by Patients

- Other studies of terminally-ill patients suggest that the vast majority of patients find that humor helps them cope with situations they would find overwhelming and that it fosters hope
- Humor has a strong role on spirituality
- The occasional use of humor has been found to be one of the ten highest rated “hope-giving” behaviors demonstrated by oncologists in a study on 126 patients with metastatic cancer

Joshua et al 2005

Are “Other Doctors are Stupid” Jokes Appropriate?

Case

LC and JJ are third-year resident physicians in obstetrics and gynecology on their way to grand rounds. “Guess what I got called for yesterday?” asks LC. “There was a pregnant woman in the emergency department suspected of having meningitis, and the intern called to ask if a lumbar puncture would pose any risk to her baby.”

JJ rolls her eyes. “Did you tell them that when pregnant women get lumbar punctures, their fetuses instantly liquify?”

LC responds, laughing, “I should have. That’s definitely a new one for the bulletin board tally sheet of stupid consultation questions.”

Common inappropriate joke in the OR: the drape that separates an anesthesiologist from members of the surgical team is a “blood-brain barrier” – this is **disparagement humor**

The answer is **nope**

- **Ridicule** is a kind of disparagement that leverages primal negative emotions and reinforces harmful stereotypes
- Humor driven by the desire to ridicule is **weaponized humor** that has been designed to demote the target to a humiliated sense of “otherness”
- Such jokes reinforce harmful stereotypes, can influence training, and can hurt relationships
- Humor in healthcare should help caregivers deal with stress, foster collegiality, and improve morale
- Remember that “humor” and “humiliation have the same etymological root.

Tips on Telling Jokes

- 1. Tell a long joke or a story
 - Patients appreciate the 4-5 minutes you take to tell a long joke. The appointment doesn't seem rushed. There is something else to think about besides a scary MRI or CT or abnormal labs
 - Stories provide a safe space to think about potentially challenging scenarios



Tips on Telling Jokes

- 2. Joke about yourself
- Doing so allows you to relax and invites the patient to relax
- The patient knows you are comfortable with yourself and humble
- You can have a conversation with someone on your level

Tips on Telling Jokes

- 3. Share something about your family
- Pro tip - Make sure your family never finds out!





Tips on Telling Jokes

- 4. Practice your jokes
- You spent a bazillion hours learning anatomy and physiology. You can take a few minutes to practice your jokes.

The background of the slide is a watercolor-style illustration of a mountain range. The mountains are rendered in various shades of blue and white, suggesting snow or mist. On the left side, there is a bright, circular sun with orange and yellow rays. The overall style is soft and artistic.

Tips on Telling Jokes

- 5. Be authentic
- Authenticity is critical to build and nurture relationships
- People can tell the difference between canned laughter and genuine laughter
- Laughing together with your patients is a sign of a shared mindset and values

Tips on Telling Jokes

- 6. Identify gelatophobes
- Gelatophobes are individuals with a heightened fear of being laughed at.
- They are not flexible or mostly inflexible.
- They are scared of being talked down to and need reassurance that you are on their side.

Tips on Telling Jokes

- 7. If there is a reasonable risk of offending or upsetting a patient, the risk is too high¹
- In these cases, use an “all-business” attitude¹
- Do not use humor to demean or belittle others²
 - Example: slave master joke by visiting physician
 - Avoid making jokes about “overmedicalization” and “iatrogenic illness”³

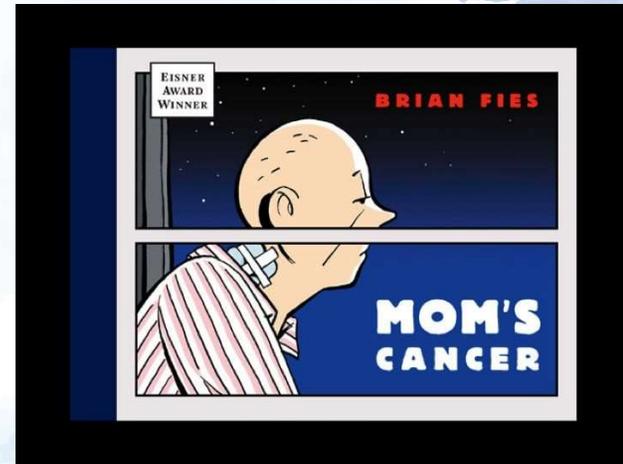
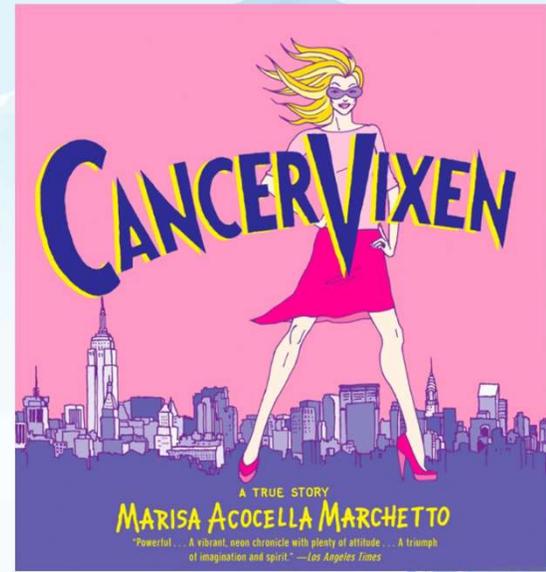
1. Sigman 2021
2. Taylor 2020
3. Moynihan 2012

Challenges to Humor in Medicine

- In the virtual era, it is very difficult for students to have in-person experiences with clinicians telling jokes. Students might not understand the value of jokes in healthcare.
- One reproductive medicine specialist noted that students commented on virtual lectures against any form of joke being told in his clinic because it might make someone “uncomfortable.”
- Time! – key is practice

Teaching with Graphic Pathologies

- Graphic pathologies – illness narratives in graphic form that have emerged to fill a niche for patients and doctors
- These provide insights to doctors about patients' personal experiences with illness
- They can be helpful for patients to learn more about their illnesses and find communities of similarly-affected patients



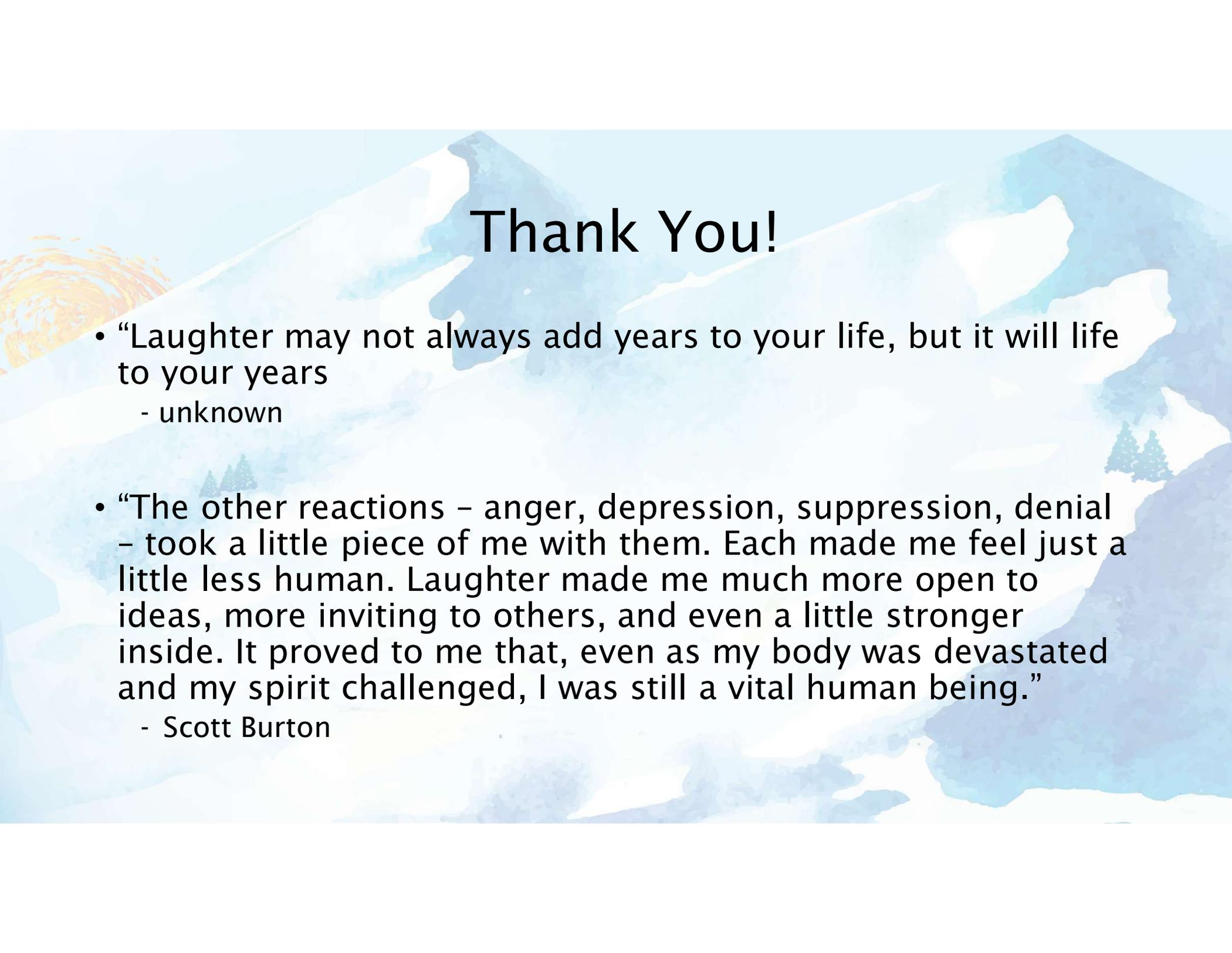
Green at al 2010

BEFORE THE DREADED CORE BIOPSY,
DR. MILLS FILLS US IN.

~~~~~ CANCER  
~~~~~ LUMPECTOMY ~~~~  
~~~~~ MAY NOT BE INVASIVE  
~~~~~ LYMPH NODES.



THE LAST DOCTOR'S VISIT WITHOUT
A TAPE RECORDER.



Thank You!

- “Laughter may not always add years to your life, but it will life to your years
- unknown
- “The other reactions – anger, depression, suppression, denial – took a little piece of me with them. Each made me feel just a little less human. Laughter made me much more open to ideas, more inviting to others, and even a little stronger inside. It proved to me that, even as my body was devastated and my spirit challenged, I was still a vital human being.”
- Scott Burton

Bibliography

- Finlay F, Baverstock A, Lenton S. Therapeutic clowning in paediatric practice. *Clin Child Psychol Psychiatry*. 2014 Oct;19(4):596-605.
- Granek-Catarivas M, Goldstein-Ferber S, Azuri Y, Vinker S, Kahan E. Use of humour in primary care: different perceptions among patients and physicians. *Postgrad Med J*. 2005 Feb;81(952):126-30.
- Green MJ, Myers KR. Graphic medicine: use of comics in medical education and patient care. *BMJ* 2010; 340
- Joshua AM, Cotroneo A, Clarke S. Humor and oncology. *J Clin Oncology*. 2005 Jan;23(3):645-8.
- Liechty RD. Humor and the surgeon: presidential address. *Arch Surg*. 1987;122(5):519-522.
- Moynihan R. Too much medicine, not enough mirth. *BMJ* 2012; 345.
- Nagler J, Mannix R. Are “other doctors are stupid” jokes appropriate? *ANA J Ethics* 2020;22(7):E583-587
- Penson RT, Partridge RA, Rudd P, Seiden MV, Nelson JE, Chabner BA, Lynch Jr TJ. Laughter: The Best Medicine? *The Oncologist*. 2005 Sep;10(8):651-60.
- Proyer RT, Rodden RA. Virtuous humor in healthcare. *AMA J Ethics*. 2020 Jul;22(7):E615-8.
- Ruch W, Heintz S, Platt T, Wagner L, Proyer RT. Broadening humor: comic styles differentially tap into temperament, character, and ability. *Front Psychol*. 18 Jan 2018. <https://www.frontiersin.org/articles/10.3389/fpsyg.2018.00006/full>
- Sigman M. Humor in reproductive medicine - the good, the bad, and the funny. *Fertil Steril*. 2021 Jun;115(6):1393-94.
- Stress Management. The Mayo Clinic. Accessed 29 Jul 2022. <https://www.mayoclinic.org/healthy-lifestyle/stress-management/in-depth/stress-relief/art-20044456>
- Taylor GA. Emotional engagement in learning through humor and storytelling. *Pediatr Radiol*. 2020 Sep;50(10):1352-1353.
- Wild B. Humor in medicine – the art of leaping over the shadows. *Dtsch Med Wochenschr* 2017; 142(25): 1919-1924