

Is there something wrong with my body?

Symptom vigilance and health uncertainty in pediatric pain

Lauren Heathcote, PhD

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King's College London



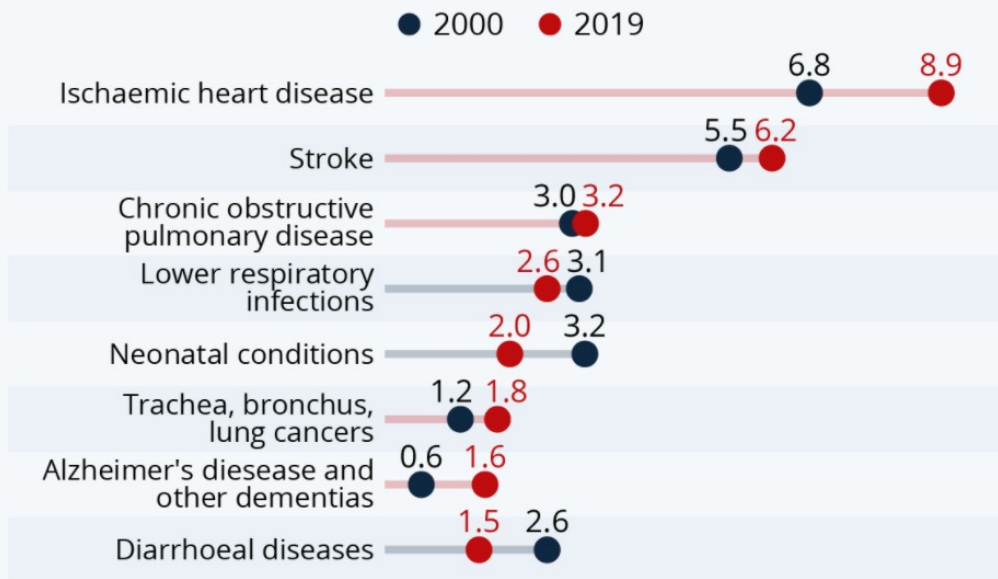
@LCHeathcote





The World's Leading Causes Of Death

Total number of people who died from the following conditions (in millions)

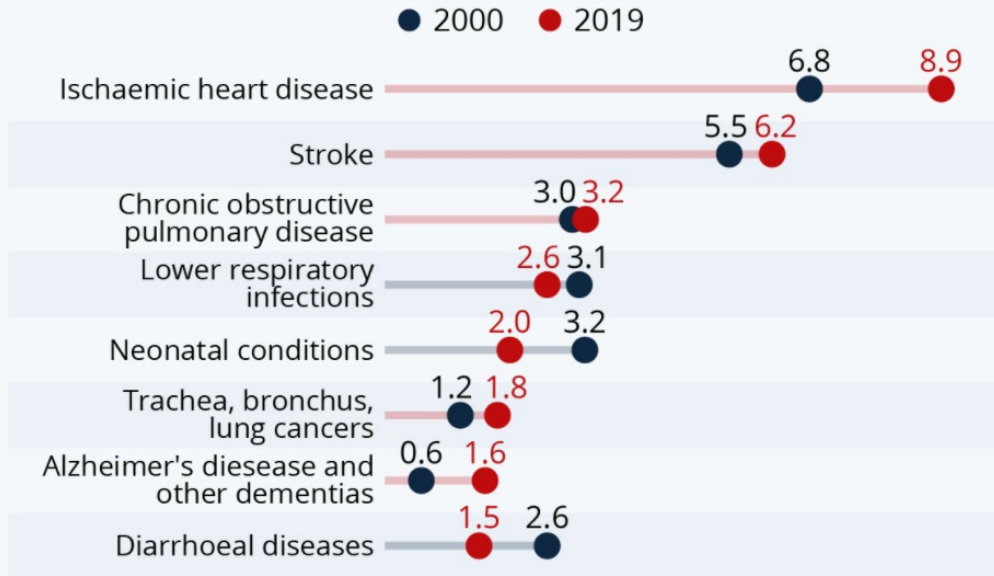


Source: World Health Organization

<https://www.weforum.org/agenda/2021/02/top-10-global-causes-death/>

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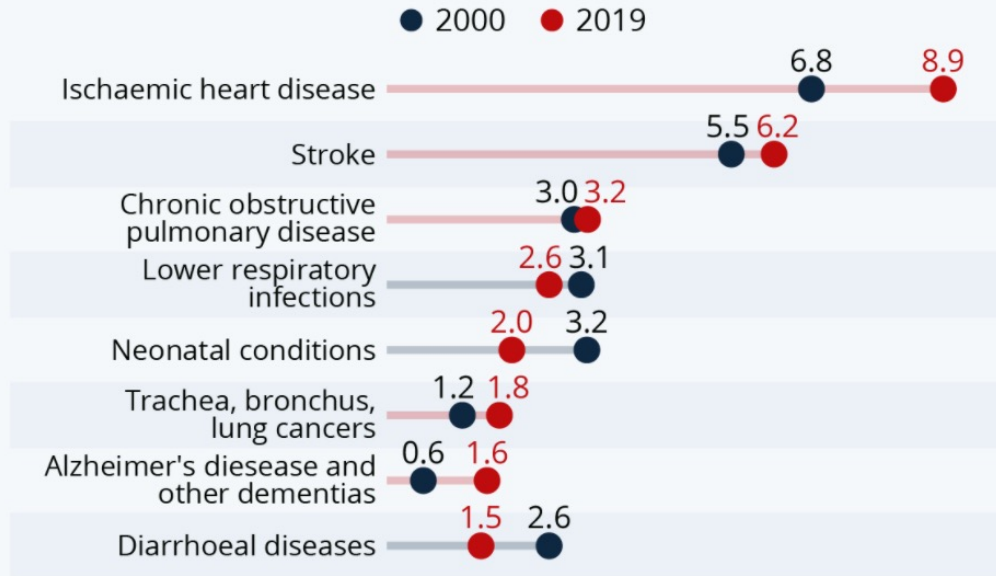
<https://www.weforum.org/agenda/2021/02/top-10-global-causes-death/>

**Relapsing-remitting conditions
(IBD, cancer)**

**Chronic conditions
(somatic symptom disorders)**

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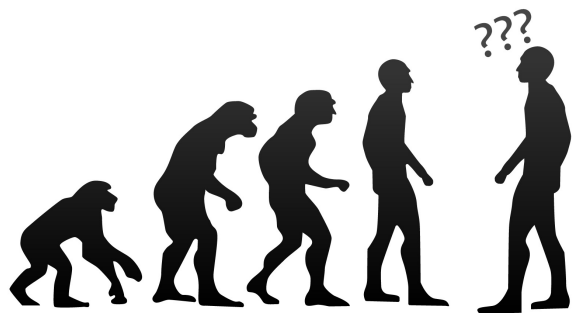
Source: World Health Organization

<https://www.weforum.org/agenda/2021/02/top-10-global-causes-death/>

**Relapsing-remitting conditions
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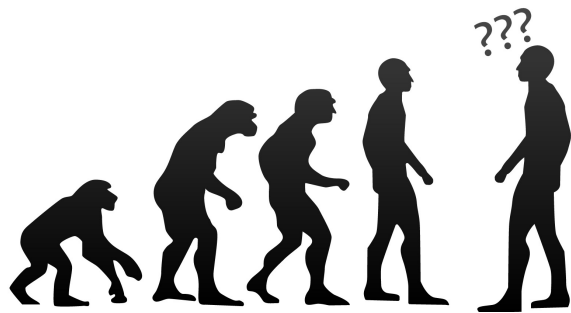
physical symptoms are a primary (but often ambiguous, non-specific) source of information with high motivational value in situations of health-related uncertainty



What is the **function** of physical symptoms?



Pain



What is the **function** of physical symptoms?



Pain

Breathlessness

Itch

Fatigue

pain uncertainty is manifest throughout the child's illness journey



pain uncertainty is manifest throughout the child's illness journey

diagnosis

A painting of a person with long dark hair, seen from behind, sitting on the edge of a wooden bed. They are looking out over a vast, hazy landscape that stretches to distant blue mountains under a pale, hazy sky. The person is wearing a light-colored, short-sleeved shirt. A blue blanket is draped over the bed. The overall mood is contemplative and somber.

pain uncertainty is manifest throughout the child's illness journey

A painting of a person with long dark hair, seen from behind, sitting on the edge of a wooden bed. They are looking out over a vast, hazy landscape that appears to be a body of water meeting distant, blue mountains under a soft, orange-hued sky. The overall mood is contemplative and somber. Two white circular outlines are superimposed on the image: one on the left containing the word 'diagnosis' and one in the center containing the word 'treatment'.

diagnosis

treatment

pain uncertainty is manifest throughout the child's illness journey

A painting of a person with long dark hair, seen from behind, sitting on the edge of a bed. They are looking out over a vast, hazy landscape that appears to be a body of water meeting distant, blue mountains under a soft, orange-hued sky. The overall mood is contemplative and somber. Three white circular outlines are overlaid on the image, each containing a word: 'diagnosis' on the left, 'treatment' in the center, and 'survivorship' on the right.

diagnosis

treatment

survivorship

Uncertainty in pediatric **chronic pain**



Article

Something Else Going On? Diagnostic Uncertainty in Children with Chronic Pain and Their Parents

Vivek Tanna ¹, Lauren C. Heathcote ¹, Marissa S. Heirich ¹, Gillian Rush ¹, Alexandra Neville ^{2,3}, Melanie Noel ^{2,3,4}, Joshua W. Pate ⁵ and Laura E. Simons ^{1,*}

Table 1. Three-item measure of perceived diagnostic uncertainty.

Item	Answer
1. I have been given a clear label/diagnosis for my (my child's) chronic pain.	Yes/No
a. What label/diagnosis have you been given?	(open)
b. Generally speaking, I agree with this label/diagnosis.*	Yes/No
2. I have been given a clear explanation about why I have (my child has) chronic pain.	Yes/No
a. Generally speaking, I agree with this explanation.	Yes/No
3. I think there is something else happening with my (my child's) chronic pain which the doctors have not found out about yet.	Yes/No
a. What do you think is going on that the doctors have not found out about yet?	(open)

Received: 5 July 2022 | Revised: 4 December 2022 | Accepted: 14 December 2022
DOI: 10.1002/ejp.2069

ORIGINAL ARTICLE



How does pain work? A qualitative analysis of how young adults with chronic pain conceptualize the biology of pain

Hayley B. Leake ^{1,2} | G. Lorimer Moseley ¹ | Lexa K. Murphy ³ | Caitlin B. Murray ^{4,5} | Tonya M. Palermo ^{4,5} | Lauren C. Heathcote ⁶

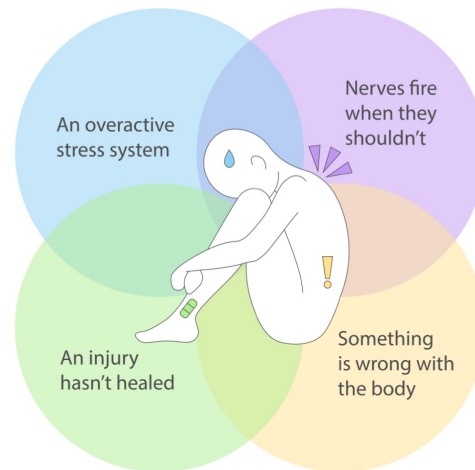
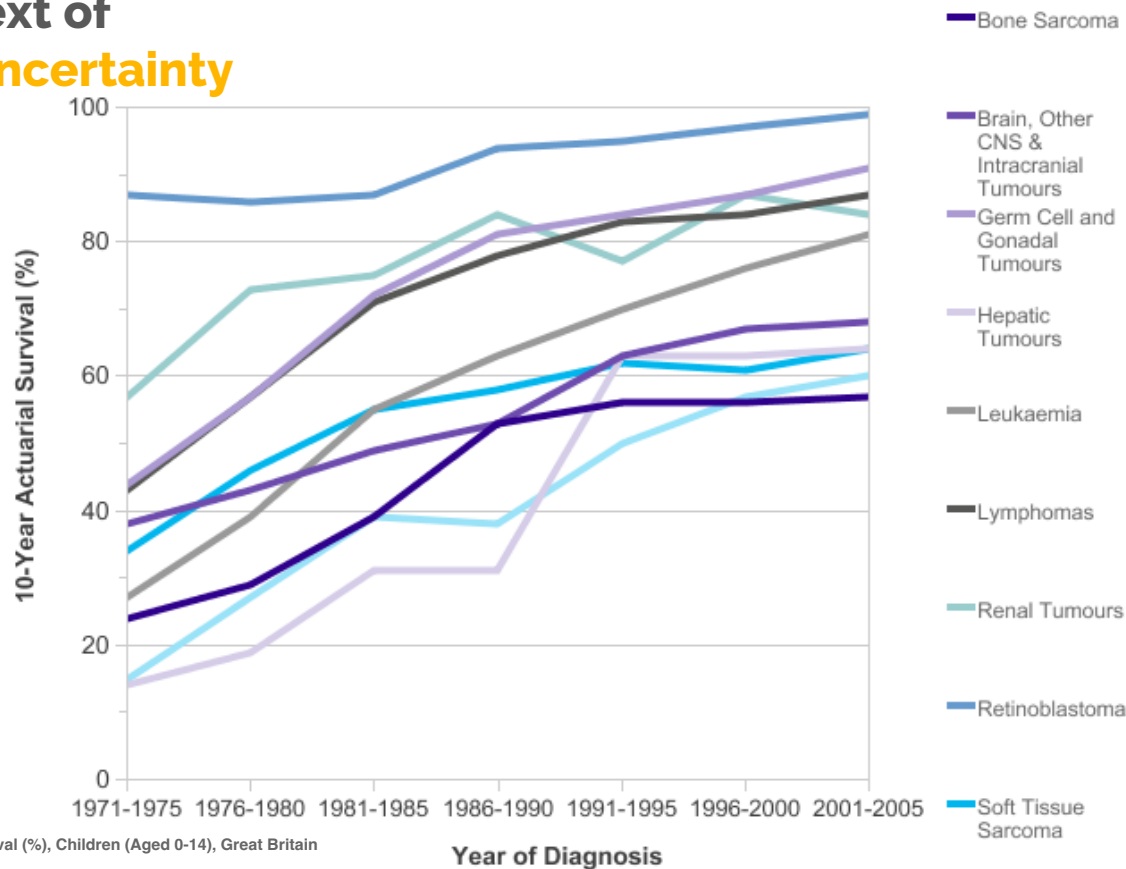


FIGURE 1 The relationship between the themes describing how young adults conceptualize the biology of pain.

Childhood Cancer Survivors

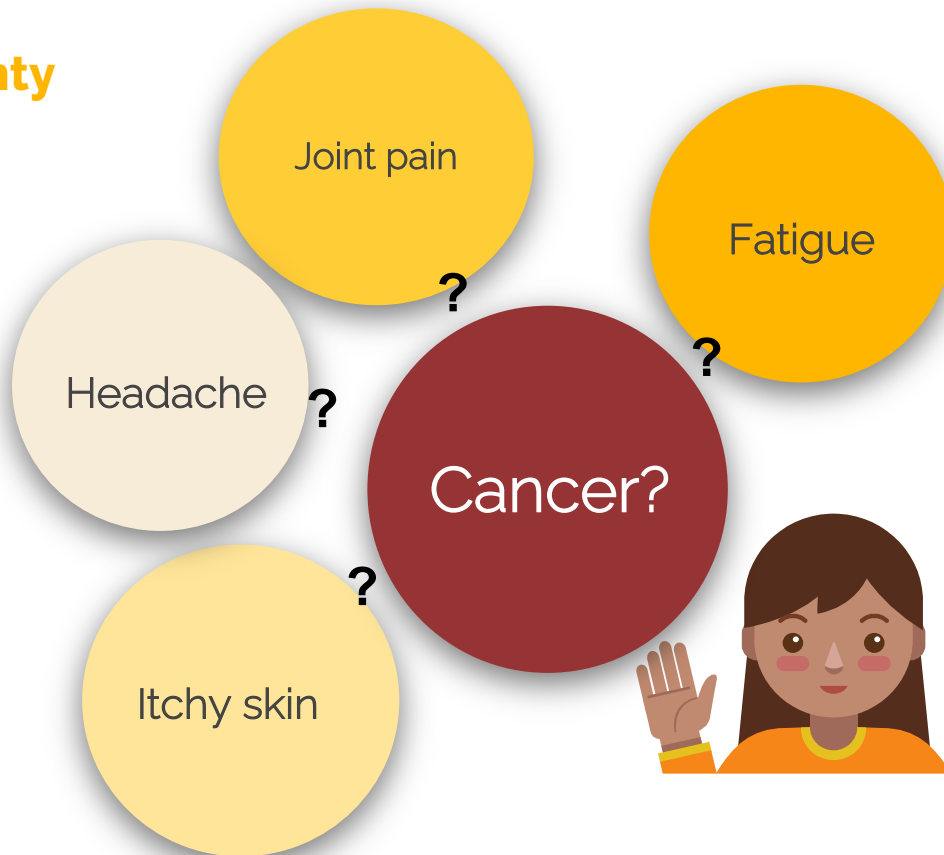
A salient context of
pain-related uncertainty



Diagnostic Groups, Ten-Year Actuarial Survival (%), Children (Aged 0-14), Great Britain

Childhood Cancer Survivors

A salient context of
pain-related uncertainty



**Pain is a common
sign of cancer
- informs diagnosis**



**Clinical instruction
to be vigilant**



Personal View
The Lancet Oncology

Advancing shared decision making for symptom monitoring
in people living beyond cancer



Lauren C Heathcote, Daniel S Goldberg, Christopher Eccleston, Sheri L Spunt, Laura E Simons, Louise Sharpe, Brian D Earp

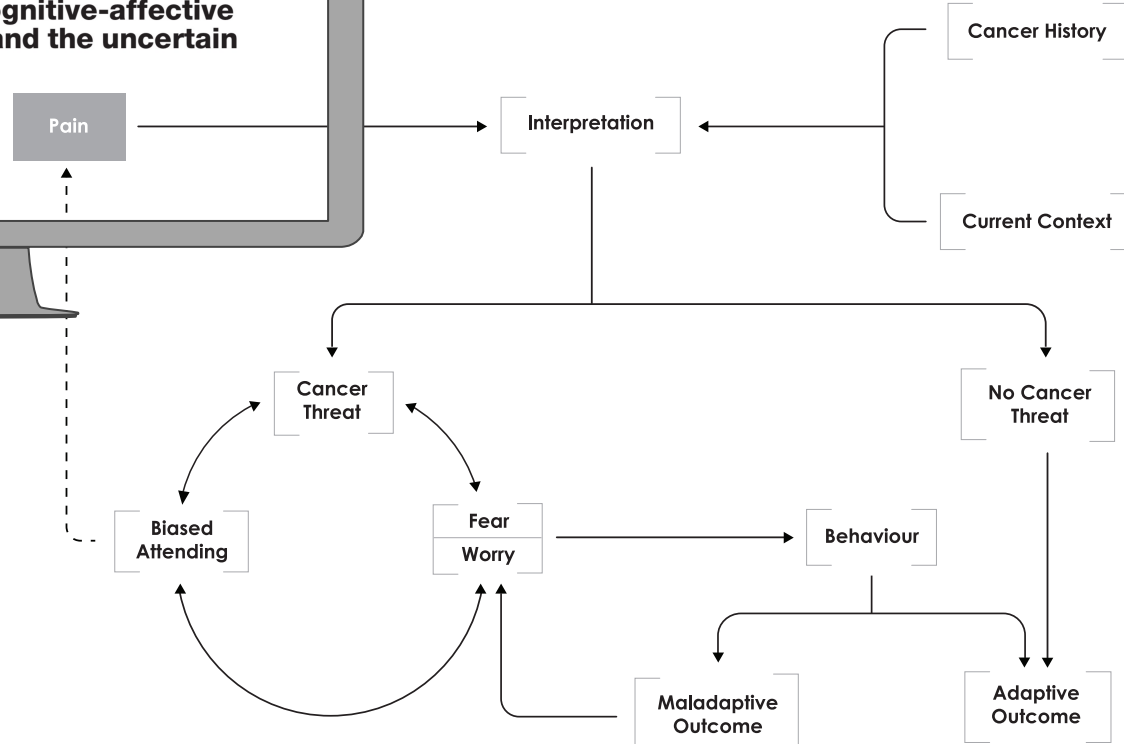
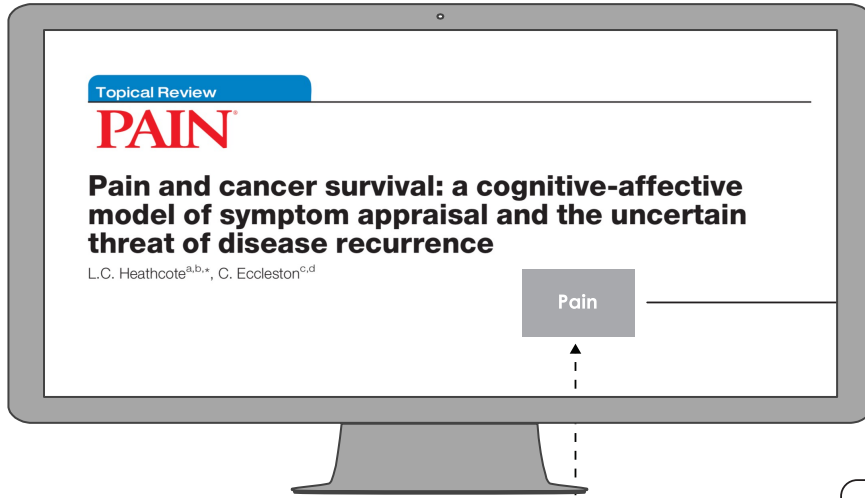
Topical Review

PAIN

Pain and cancer survival: a cognitive-affective model of symptom appraisal and the uncertain threat of disease recurrence

L.C. Heathcote^{a,b,*}, C. Eccleston^{c,d}





Cancer Threat Interpretation (CTI) Model



Capturing lived experience of pain-related uncertainty

Childhood cancer survivorship is laden with uncertainty about symptoms



PSYCHOLOGY & HEALTH
2021, VOL. 36, NO. 10, 1182-1199
<https://doi.org/10.1080/08870446.2020.1836180>

Routledge
Taylor & Francis Group



Symptom appraisal in uncertainty: a theory-driven thematic analysis with survivors of childhood cancer

Lauren C. Heathcote^{a*}, Nele Loecher^{a*}, Pamela Simon^b, Sher Abbie Jordan^c, Perri R. Tutelman^d, Sarah Cunningham^e, Lidia Sci Laura E. Simons^f

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ABSTRACT

Objective: Somatic symptoms capture attention, demand interpretation, and promote health behaviors. Symptom appraisal is particularly impactful within uncertain health contexts such as cancer survivorship. Yet, little is known about how individuals make sense of somatic symptoms within uncertain health contexts, nor how this process guides health behaviors.

Design: 25 adolescent and young adult survivors of childhood cancer completed semi-structured interviews regarding how they appraise and respond to changing somatic sensations within the uncertain context of survivorship.

Main Outcome Measures: Interviews were transcribed verbatim and subjected to a hybrid deductive-inductive thematic analysis, guided by the Cancer Threat Interpretation model.

Results: We constructed three themes. *Symptoms as signals of bodily threat* (theme 1) captured that participants described commonly interpreting and worrying about everyday sensations as indicating cancer recurrence or new illness. *Playing detective with bodily signals* (theme 2) captured participants' felt need to employ cognitive and behavioral strategies to determine whether somatic sensations indicated a credible health threat. These two themes are qualified by the final theme, *Living with symptom-related uncertainty* (theme 3), which captured participants' recognition that post-cancer symptoms are wily and influenced by psychological factors such as anxiety.

Conclusions: These data highlight that making sense of everyday somatic sensations can be particularly challenging following an experience of cancer. There is a need for novel symptom management approaches that target how somatic sensations are appraised and responded to as signals of bodily threat.

PAPER

When "a headache is not just a headache": A qualitative examination of parent and child experiences of pain after childhood cancer

Perri R. Tutelman^{1,2}, Christine T. Chambers^{2,3}, Robin Urquhart⁴, Conrad V. Fernandez^{5,6}, Lauren C. Heathcote⁷, Melanie Noel^{8,9}, Annette Flanders⁶, Gregory M.T. Guilcher^{10,11}, Fiona Schulte^{11,12}, Jennifer N. Stinson^{13,14}, Julia MacLeod¹⁵, Maya Stern¹⁶

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¹³Child Health Evaluative Sciences, The Hospital for Sick Children, Toronto, Ontario, Canada

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¹⁵Patient Partner, Halifax, Nova Scotia, Canada

¹⁶Patient Partner, Toronto, Ontario, Canada

Abstract

Objective: Today, more than 80% of children diagnosed with cancer are expected to survive. Despite the high prevalence of pain associated with the diagnosis and treatment of childhood cancer, there is a limited understanding of how having cancer shapes children's experience and meaning of pain after treatment has ended. This study addresses this gap by exploring childhood cancer survivors' (CCS) experiences of pain from their perspective and the perspective of their parents.

Methods: Twenty semi-structured interviews were completed with CCS (50% female; mean age = 13.20 y, range = 8-17 y) and their parents (90% mothers). Data were analyzed using interpretive phenomenological analysis.

Results: Analyses revealed three superordinate themes present in the data: (a) pain is a changed experience after childhood cancer; (b) new or ambiguous pains may be interpreted by CCS and parents as a threat of disease recurrence, late effects, or a secondary cancer; and (c) pain interpretation occurs within the broader context of how CCS and parents appraise their cancer experience. Parents generally appraised their child's cancer and pain as more threatening and were influential in guiding their child's interpretations.

Conclusions: The cancer experience played an important role in shaping CCS' and their parents' experience and interpretation of pain in survivorship. This study provides novel data to inform the development and refinement of new and existing conceptual models of pain and symptom perception after cancer. The results also point to key areas for future investigation and clinical intervention to address the issue of pain in cancer survivorship.



KEYWORDS

cancer, cancer pain, childhood cancer survivors, interpretive phenomenological analysis, oncology, pediatric pain, qualitative research

WILEY



Symptom appraisal in uncertainty: a theory-driven thematic analysis with survivors of childhood cancer

Lauren C. Heathcote^{a*} , Nele Loecher^{a*}, Pamela Simon^b, Sheri L. Spunt^c, Abbie Jordan^d, Perri R. Tutelman^e, Sarah Cunningham^a, Lidia Schapira^f and Laura E. Simons^a 



In-depth, semi-structured interviews with **25** AYA cancer survivors and their parents




AMERICAN
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MATERNAL & CHILD HEALTH
RESEARCH INSTITUTE

Cancer Type

- Leukemia (44%)
- Osteosarcoma (24%)
- Ewing Sarcoma (12%)
- Lymphoma (12%)
- Wilms Tumor (4%)
- Germinoma (4%)

A person with dark, curly hair is shown in profile, looking upwards. They are standing in a doorway or between two vertical wooden beams. The background is a dark interior with a window visible in the distance. The overall color palette is muted, with a lot of brown and dark tones.

What is uncertain about pain after cancer?

What is **uncertain** about pain after cancer?

"I have a headache! Does that mean my tumor's back or does that just mean I have a headache?"

"there is that precarious line that we all walk, not wanting to be a paranoid mess on one side and being vigilant on the other"

"it doesn't matter how much you tell yourself you are being irrational and the pain is probably nothing, the mind eventually wins over reason"

Quantifying pain-related uncertainty

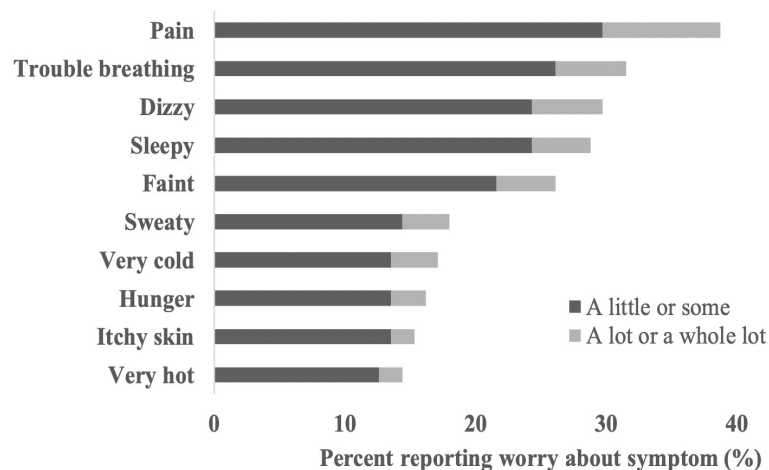
Received: 15 January 2021 | Accepted: 1 February 2021
DOI: 10.1002/pon.5647

ORIGINAL ARTICLE

WILEY

Worry about somatic symptoms as a sign of cancer recurrence: prevalence and associations with fear of recurrence and quality of life in survivors of childhood cancer

Sarah J. Cunningham¹ | Michaela Patton² | Fiona Schulte^{2,3,4} |
Patricia A. Richardson^{5,6} | Lauren C. Heathcote¹



Cancer and Palliative
Brief Report

OPEN

PAIN
REPORTS

Unique associations of pain frequency and pain-related worry with health-related quality of life in survivors of childhood cancer

Lauren C. Heathcote^{a,b}, Sarah J. Cunningham^b, Michaela Patton^c, Fiona Schulte^{c,d,e}

Table 2

Hierarchical linear regression models for physical and emotional health-related quality of life.

	Physical HRQoL			Emotional HRQoL		
	B	R ²	F	β	R ²	F
Step 1		0.19	7.62***		0.18	6.56***
Time off treatment	−0.08			0.12		
Age at diagnosis	−0.29**			−0.07		
Sex	−0.35***			−0.36***		
Step 2		0.40	15.38***		0.22	6.52***
Time off treatment	0.03			0.17		
Age at diagnosis	−0.12			0.01		
Sex	−0.24**			−0.31**		
Pain frequency	−0.49***			−0.23*		
Step 3		0.46	15.23***		0.26	6.45***
Time off treatment	0.04			0.18		
Age at diagnosis	−0.10			0.03		
Sex	−0.22**			−0.29**		
Pain frequency	−0.37***			−0.13		
Pain worry	−0.27**			−0.23*		

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.
HRQoL, health-related quality of life.



**Can we reduce symptom
uncertainty?**

International Survey of Pediatric Oncologists



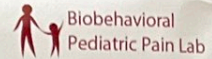
AMERICAN
PSYCHOLOGICAL
ASSOCIATION



International Survey of Pediatric Oncologists' Beliefs, Attitudes, and Communication Practices Regarding Symptom Self-Monitoring for Childhood Cancer Survivors

Sarah N. Webster, Sarah J. Cunningham, Sheri L. Spunt, Claire Wakefield, Stephanie Smith, Nicole M. Alberts, Oxana Palesh, Laura Simons, Lauren C. Heathcote

Department of Anesthesiology, Perioperative and Pain Medicine, Stanford University



Background

Childhood cancer survivors face a lifetime of physical and mental health challenges, including knowing how to monitor and interpret physical symptoms while living with the uncertainty that their cancer may return.

The child's oncologist plays a central role in guiding the patient's symptom self-monitoring practices.

Little is known about how pediatric oncologists communicate about symptom self-monitoring, and whether they believe that symptom self-monitoring can be a source of distress for their off-therapy patients.

Methods

A global sampling recruitment technique. Providers were asked 22 items regarding symptom monitoring for off-therapy survivors of childhood

This study aims to...

Understand pediatric oncologists' attitudes, beliefs, and communication styles regarding symptom self-monitoring for their off-therapy patients

• 196 international cohort of pediatric oncologists
• Mean age: 47
• 78% White, 11% Black, 1.5% Asian
• 64% Female

• 40% had practiced medicine for over 15 years
• 52% General Hem/Oncology
• 30% Solid Tumor
• 18% Lymphoma/Leukemia

Participants



"I try to tailor my conversations based on patient/parent level of anxiety. Sometimes it is difficult to find the balance of keeping them informed without causing more stress"
-Female, General Hem/Onc

"I tend to proactively stress much more the anxiety that goes with finishing therapy and symptoms that may arise that are not going to be recurrence than belaboring the symptoms in detail. This arises from my personal experience of having a living sarcoma during fellowship and spending the first 10 years freaking out whenever I got a new symptom"
-Female, Solid Tumor

"ALL of my patients experience a high level of anxiety about their cancer returning, even after more than 10 years"
-Female Leuk/Lymph

"Informing patients of self monitoring it empowers them and I feel it likely to reduce anxiety"
-Female, General Hem/Onc



Results

Physicians

99% of clinicians encourage self-monitoring with off-therapy patients at some point

92% discuss which symptoms could indicate a recurrence and 3% discuss which were unlikely to indicate a recurrence

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ological Association

Disease Specialization...

Leuk/Lymph oncologists feel more confident informing patients about which symptoms they should be concerned about ($F(2,193)=319, p=.05$) compared to Gen Hem/Oncologists

Gen Hem/Oncologists are more likely to encourage self-monitoring for signs of treatment late effects ($F(2,193)=2.974, p=.053$) compared to oncologists who focus on solid tumors

Gen Hem/Oncologists are more likely to only encourage symptom monitoring for patients who have a high risk for cancer recurrence or late effects of treatment ($F(2,193)=3.54, p=.024$) compared to Leuk/Lymph oncologists

Over 15 years of experience...

More likely to endorse that their off-therapy patients worry unnecessarily about symptoms of late effects of treatment ($t=2.53, p=.012$)

More likely to discuss which symptoms are likely ($t=-2.48, p=.011$) and unlikely ($t=-2.31, p=.022$), a sign of late effects of treatment

More likely to worry that encouraging symptom monitoring will lead to additional clinic visits or inquiries ($t=2.38, p=.018$)

Perceived Stress and Worry...

Almost one third of pediatric oncologists worry that encouraging symptom self-monitoring would cause their patients to experience unnecessary stress.

These oncologists encourage self-monitoring significantly less often for symptoms of cancer recurrence ($t=4.47, p=.001$) and treatment late effects ($t=2.82, p=.005$)

More likely to directly ask patients if they ever worry that symptoms are a sign of late effects of treatment ($t=2.45, p=.015$).

I would use a brief screening tool to assess how much my off-therapy patients worry about their symptoms



Yes
Maybe
No

Participants

- Adult caregivers of children from two SCA clinics (Hydroxyurea/Penicillin)
- Providers were recruited eligible if they were

Caregiver Demographics

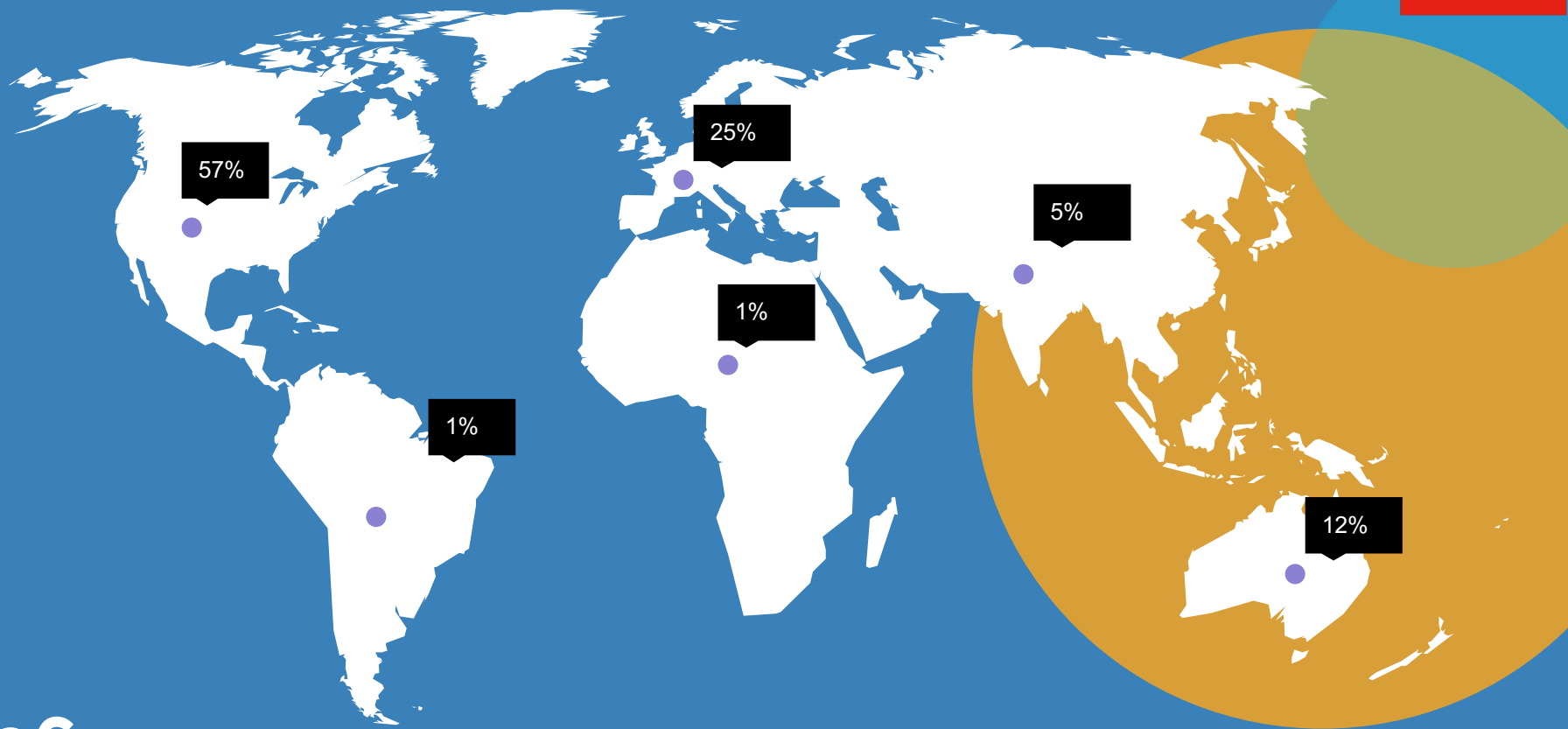
Race	Black/African American (12%)
Gender	Female (100%)
Employment Status	Single (50%)
Insurance Status	Publicly Insured (40%)

Procedures

- 28 English-speaking interviews exploring
- 11 female and majority 30-minute interviews system in outpatient

Data Analysis

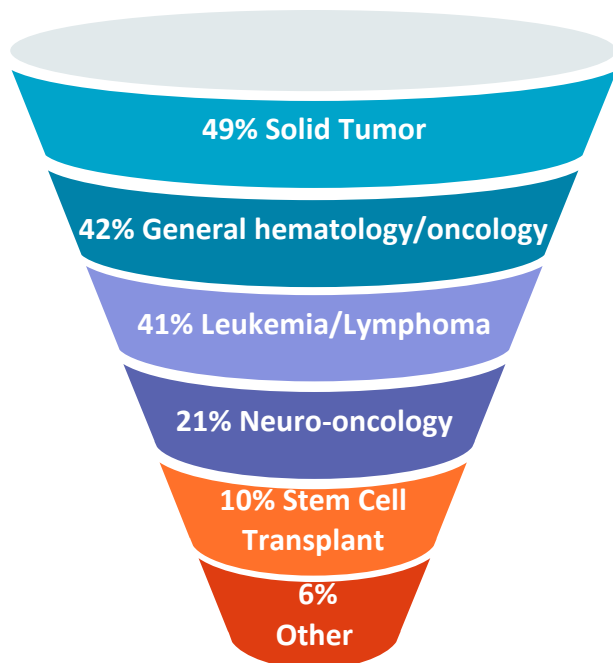
- Data were transcribed respondent type and a (Snelgrove, 2019).
- Data collection continu



196 pediatric oncologists

77.6% spend more than 50% of their time in
direct patient care

Sample



Symptom self-monitoring is perceived as **important** and **can be encouraged**

Most clinicians believed that **it is important** for their off-therapy patients to...

self-monitor for symptoms of cancer recurrence **90%**

self-monitor for symptoms of treatment late effects **94%**

Results

Although some acknowledged that these are typically detected by routine surveillance **before symptoms appear...**

cancer recurrence **30%**

treatment late effects **55%**

Almost all clinicians reported...

encouraging symptom self-monitoring with their off-therapy patients at some point **99%**



Large heterogeneity in perception of unnecessary worry and communication practices

Do off-therapy patients worry unnecessarily about symptoms of cancer recurrence?

Yes **31%** No **31%** Neutral **38%**

Do off-therapy patients worry unnecessarily about symptoms of late effects?

Yes **14%** No **50%** Neutral **36%**

62% discussed which symptoms could indicate recurrence

43% discussed which symptoms were *unlikely* to indicate recurrence



Results

Information is Power



I try to **empower the patients** with knowledge about their disease and the risks of recurrence so that they have some control. I therefore think it is an important part of follow-up appointments with this age.
-Female, Solid Tumors

Important to **empower patients** about self-care and symptom awareness.
-Female, General Hem/Onc



A Fine Balance Between Informed & Worried



Sometimes it is **difficult to find the balance** of keeping them informed without causing more stress.
-Female, General Hem/Onc

I try to tailor my conversations based on patient/parent level of anxiety. Sometimes it is **difficult to find the balance** of keeping them informed without causing more stress.
-Female, General Hem/Onc



The Patient Doctor



I tend to proactively stress much more the **anxiety** that goes with finishing therapy and symptoms that may arise that are **not going to be recurrence** than belabouring the symptoms in detail.

This arises from my **personal experience** of having a Ewing sarcoma during fellowship and spending the first 10 years freaking out whenever I got a new symptom :)

-Female, Solid Tumors



Communication training for oncologists to de-threaten symptoms?



Personal View

Advancing shared decision making for symptom monitoring in people living beyond cancer

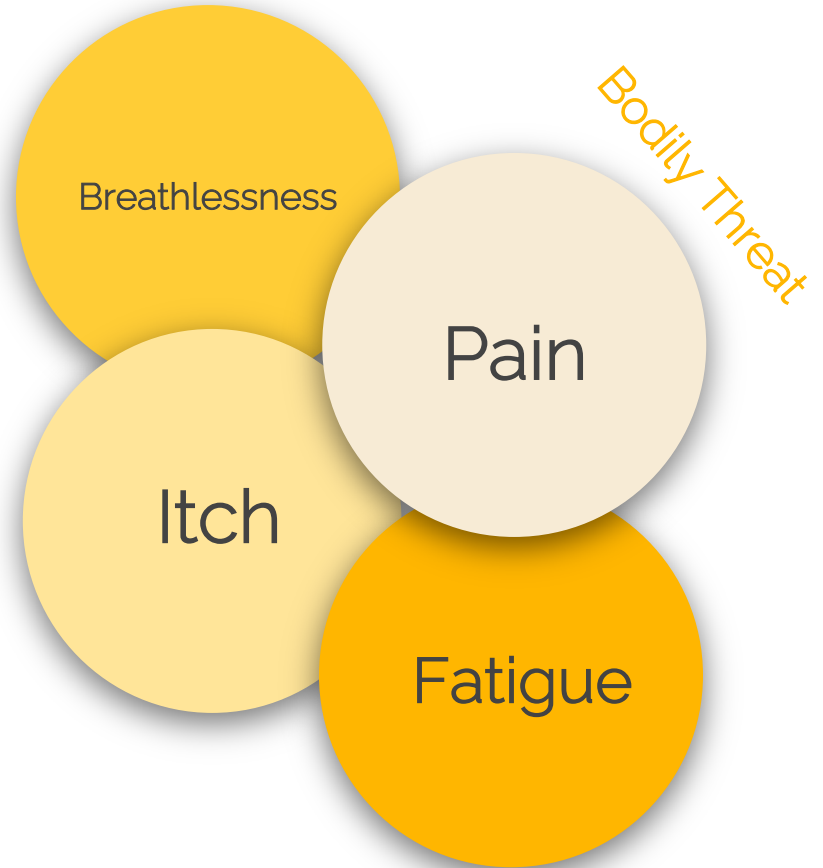


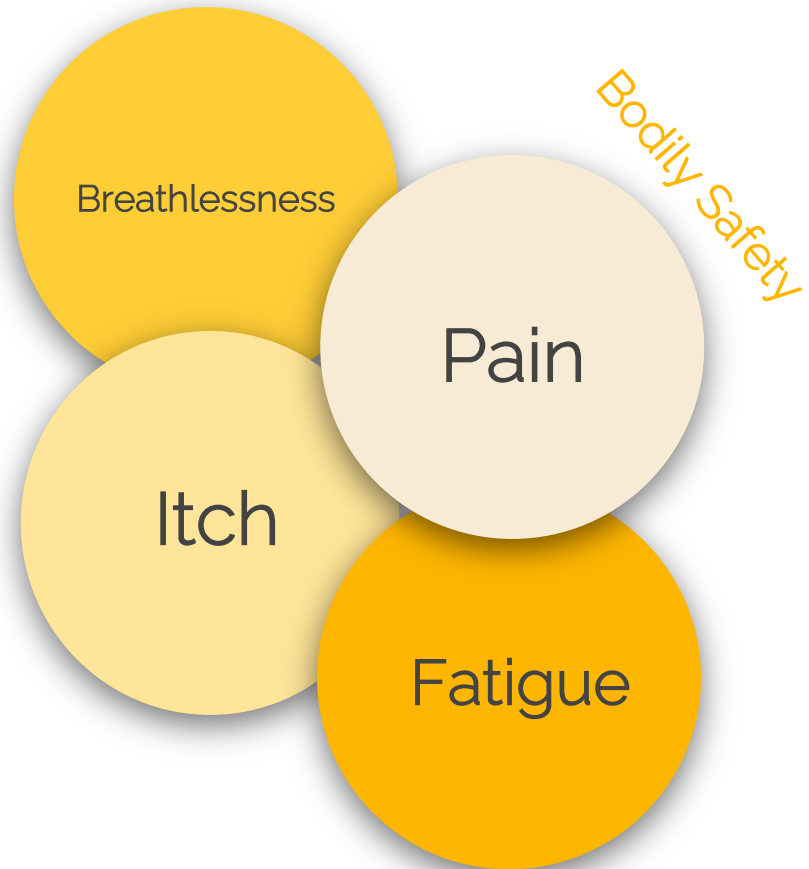
Lauren C Heathcote, Daniel S Goldberg, Christopher Eccleston, Sheri L Spunt, Laura E Simons, Louise Sharpe, Brian D Earp

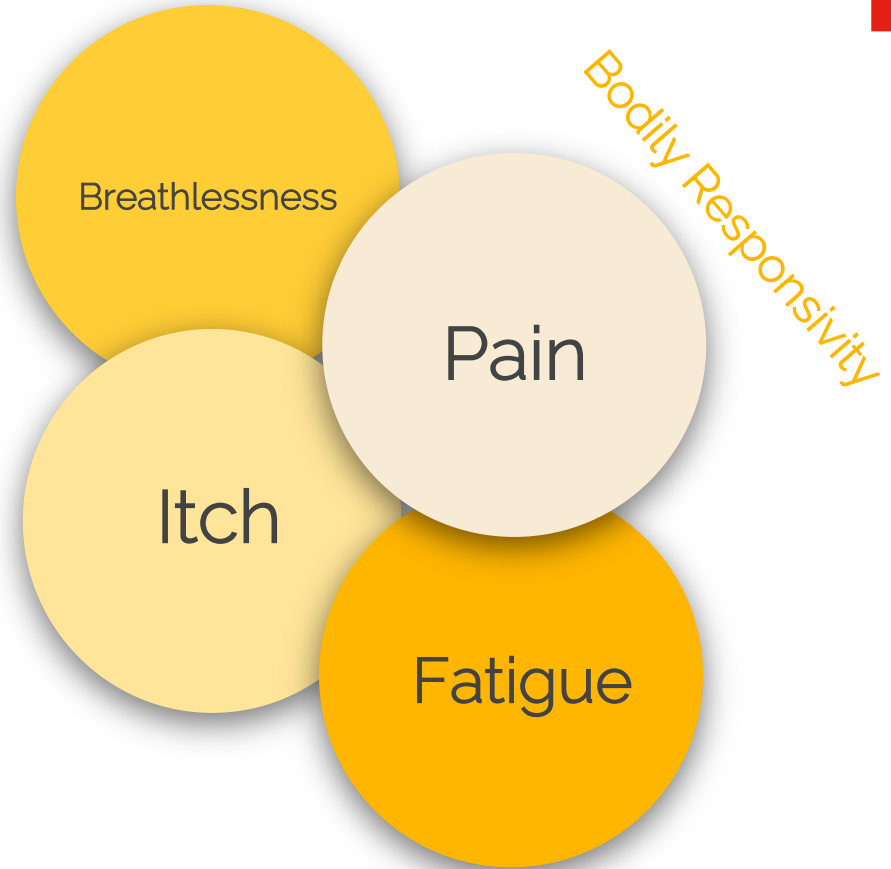
Panel 1. Considerations for communicating with off-therapy patients about symptom self-monitoring.

- Explain that symptom-related worry is normal after finishing cancer treatment.
- Ask an open-ended question to probe unexpected symptom worries, e.g., “what are the things you’re worrying about?”
- Periodically counsel patients about symptom self-monitoring for pertinent positives (symptoms highly related to tumor recurrence/late effects) and pertinent negatives (identify symptoms that are not a cause for concern, to lessen patient worries).
- Consider consultation with and/or referral to psychology or social work if symptom self-monitoring and worry is excessive and impairing.







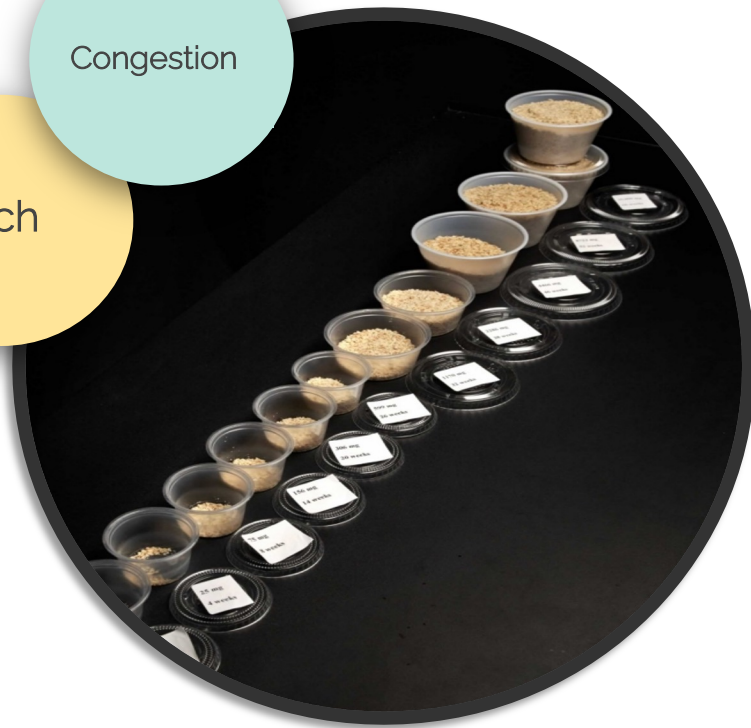


Oral immunotherapy treatment for food allergies in children



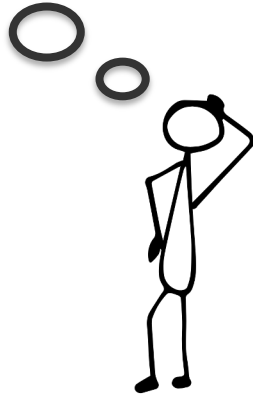
Congestion

Itch



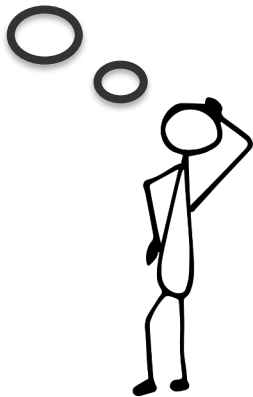
These are uncomfortable side effects of treatment that I should try to minimize

I'm sorry you're not feeling well!
Symptoms are just an unfortunate part of treatment.



If I'm having symptoms, maybe
my allergies are very severe and
I'm resistant to treatment

I'm sorry you're not feeling well!
Symptoms are just an
unfortunate part of treatment.



If I'm having symptoms, it means that the treatment is working and my body is getting stronger

I'm sorry you're not feeling well, but symptoms mean the treatment is working!

Symptoms as Positive
Signals Mindset



Harnessing mindsets about symptoms as positive signals



“Symptoms as Side Effects” (24 patients)

Stanford MEDICINE | Sean N. Parker Center
for Allergy & Asthma Research

Symptoms are an
unfortunate side
effect of the
treatment

Dosing & Your
Symptoms:
Managing
side-effects
of treatment



“Symptoms as Positive Signals” (26 patients)

Stanford MEDICINE | Sean N. Parker Center
for Allergy & Asthma Research

Symptoms are a
signal that the body is
strengthening and
treatment is working

Dosing & Your
Symptoms:
Building Up
Strength
to Food Allergies



Managing Discomfort

There are a few things you can do to minimize the discomfort of your symptoms during the dosing process:

- Take your dose on a full stomach
- Drink some water after taking your dose

"The hardest part of the study was feeling sick after taking my daily dose. I dreaded taking it! But by drinking more water every day I was able to feel less sick and get through to the end of the study. I'm glad I stuck with it."
– Leslie, age 14



"It's really scary to start feeding your child the food they've been avoiding their whole life, especially when you see your child having symptoms and are worried you're putting her at risk. To help minimize her discomfort, I always made sure she took her doses on a full stomach, and in the end our peace of mind has been completely worth it."
– Caroline, Leslie's mom



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Lucile Packard
Children's Hospital
Stanford

Help Your Body Build Strength

When your muscles are sore from running, you rest, hydrate, and stretch. There are also things you can do to be more comfortable while your symptoms work with your body to build up tolerance during the dosing process.

- Take your dose on a full stomach
- Drink some water after taking your dose

"The hardest part of the study was feeling sick after taking my daily dose. But I know that meant that my body was getting stronger and more able to handle peanuts! I'm glad I stuck with it." – Leslie, age 14



"It's really scary to start feeding your child the food they've been avoiding their whole life, especially when you see your child having symptoms and are worried you're putting her at risk. I had to keep reminding myself that the symptoms are actually a sign that the treatment is working, and in the end our peace of mind has been completely worth it."
– Caroline, Leslie's mom



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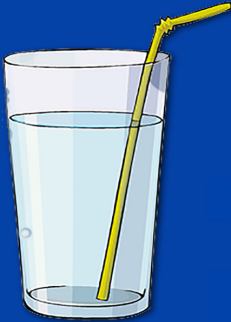
Lucile Packard
Children's Hospital
Stanford

Reminders in frequented locations (e.g. fridge magnets!)

“Symptoms as Side Effects”

Allergy Experience Study Helpful Tip:

Drink water to reduce symptoms!




Concerns?
Call us:
Maggie:

Dr. Nadeau:

“Symptoms as Positive Signals”

Allergy Experience Study Helpful Tip:

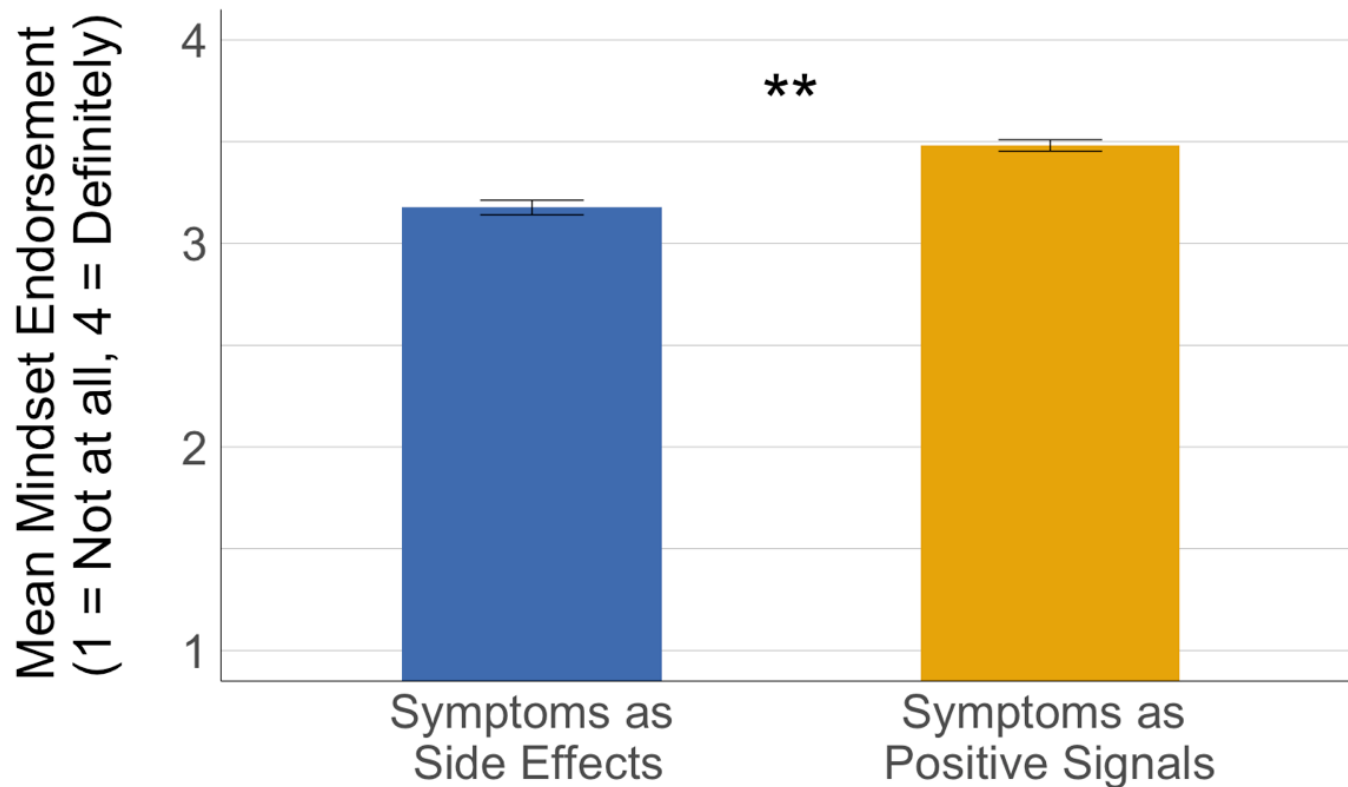
Symptoms mean your immune system is getting STRONGER!



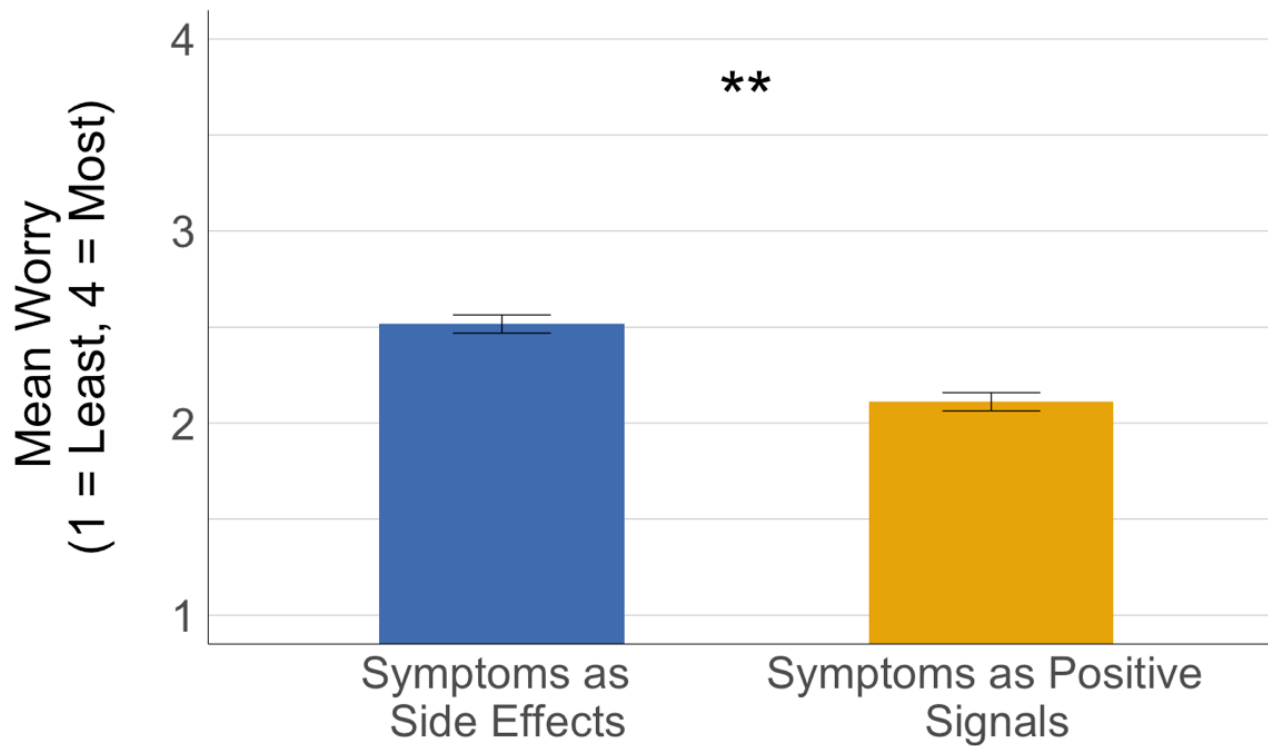
Questions? Call us:
Maggie:

Dr. Nadeau:

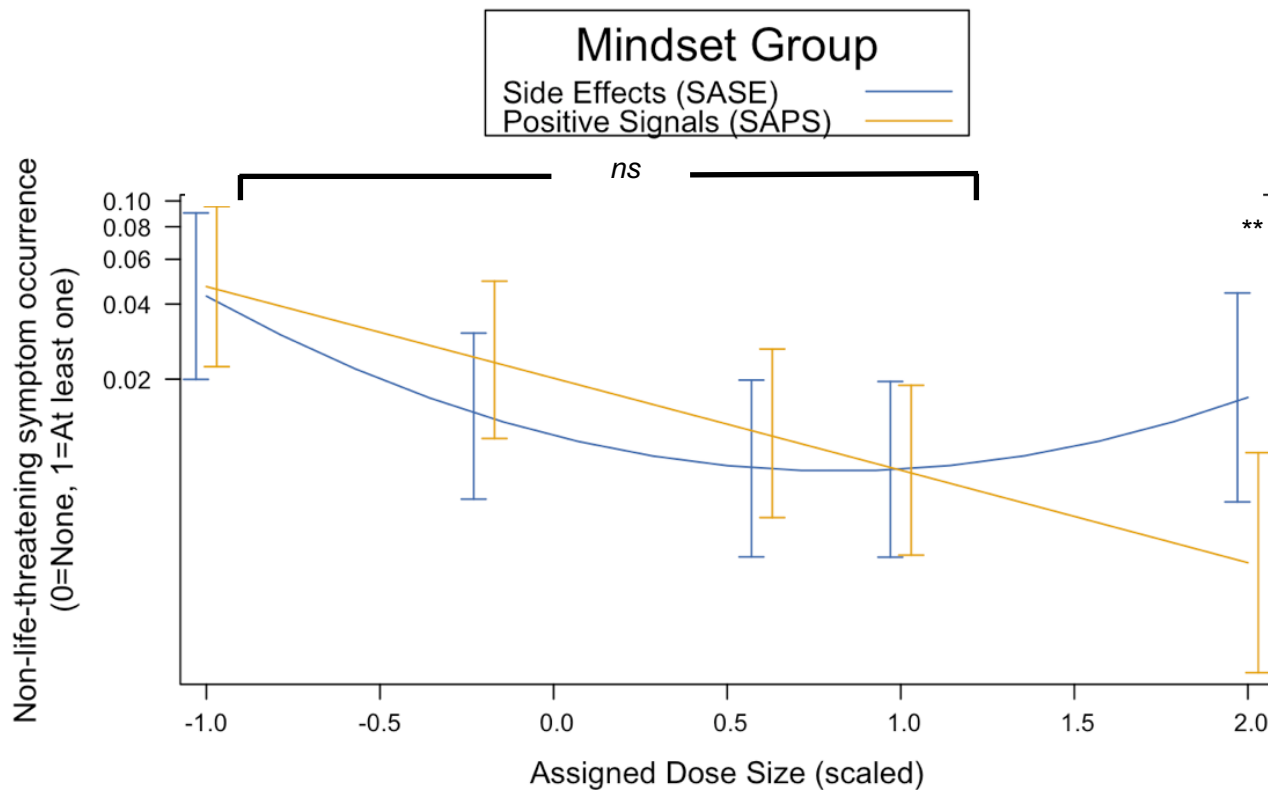
Mindset about Symptoms



↓ Anxiety



↓ Symptoms

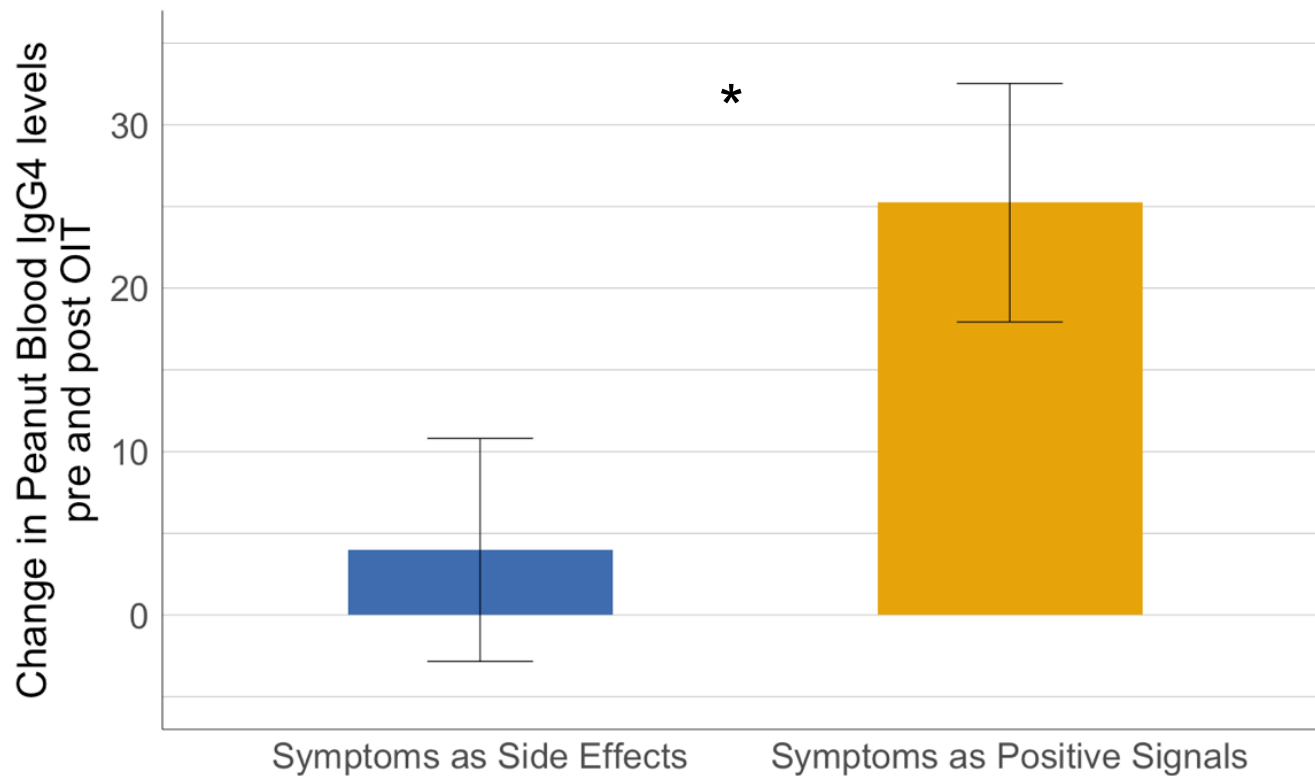


↓ Patient contact re: symptoms

Contact with treatment staff related to symptoms	
Symptoms as Side Effects	17.5% (27/154)
Symptoms as Positive Signals	9.4% (15/159)

$$\chi^2(1) = 4.42, p = .036$$

↑ Treatment Efficacy



$t = 2.13, p = .043$

“Symptoms as Side Effects”



“Symptoms as Positive Signals”



Harness **adaptive mindsets** throughout the illness journey

A soft, painterly illustration of a person with long dark hair, seen from behind, sitting on the edge of a bed. They are looking out over a calm body of water towards distant, hazy mountains under a pale sky. The scene is peaceful and contemplative. Three white circular callouts are overlaid on the image, each containing text.

target **symptom
mindsets** in first
illness experiences?

target **body
mindsets** in
chronic
conditions?

target **body** **mindsets** in chronic conditions?

“

While finishing cancer treatment is something to celebrate, it can also bring new challenges for the child and their family. It is vital that we can offer evidence-based support and treatment programmes for young survivors to help them manage ongoing pain after cancer.

”

Dr Lauren Heathcote



Over 50%

of childhood cancer survivors report ongoing pain symptoms

Alleviating pain in childhood cancer survivors

Dr Lauren Heathcote, King's College London

Pain treatment in cancer currently focuses on alleviating the pain during active cancer, but there's almost no tailored treatment approaches to alleviate **post-cancer pain** in children and adolescents.


Using this funding, **Dr Heathcote** and her team will develop and test one of the first behavioural interventions to alleviate the impact of pain and improve wellbeing in childhood cancer survivors.



- Children **experience uncertainty about pain** and other somatic symptoms as a normal part of medical illness
- Uncertainty about symptoms is a social phenomenon that is **shaped within clinical encounters**
- **Language is powerful**. Doctor-patient communication can shape patients' symptom-related uncertainty in for the worse and for the better



Take Home Messages



Health Psychology Section
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King's College London

KING'S
College
LONDON

Thank you!

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