

Research Spotlight: Courage Kenny Team Develops and Validates New Fibrosis Grading Scale

A New Standard for Cancer-Related Fibrosis Assessment



Laura Gilchrist, PT, PhD

Cancer-related fibrosis – tight, stiff, or immobile tissue that can develop after surgery or radiation – is a common challenge for people with breast and head and neck cancers. Yet

clinicians have long lacked a standardized, rehabilitation-specific tool to describe it. A new study led by the Courage Kenny Research Center and Courage Kenny Rehabilitation has now filled that gap.

In “Reliability and Concurrent Validity of the Courage Kenny – Fibrosis Grading Scale for Breast or Head and Neck Cancer-Related Fibrosis,” the Courage Kenny research team evaluated a newly developed fibrosis assessment tool designed specifically for rehabilitation practice.

A Collaborative Effort Rooted in Clinical Insight

This project reflects the best of Courage Kenny’s integrated clinical–research model. The scale itself was conceived by **Laura Franco, PT**, and **Monica Heinen, PT**, who recognized the need for a practical, consistent way to document fibrosis in everyday patient care. Their early version became the foundation for a multi-phase research study led by **Laura Gilchrist, PT, PhD**, **Margaret Weightman, PT, PhD**, and **Carolyn Holm, PT**.

Additional clinicians, including **Jessica Taylor** and **Melanie Anderson**, played key roles as assessors during data collection, ensuring the tool was tested rigorously and in real-world clinical conditions. Support from **Tom Kelley** helped identify eligible participants, enabling the study to reach a diverse group.

The CK-FGS was developed and evaluated using a multi-phase research design.

Phase 1: Expert-Driven Refinement

More than 60 rehabilitation professionals across the country participated in iterative surveys to evaluate the scale’s clarity, relevance, and feasibility. Their feedback helped refine the tool to include:

- Three patient-reported items that address perceptions of tissue stiffness, pain, functional impact; and
- Three clinician-rated items that assess superficial skin mobility, joint range of motion, and edema.

All CK-FGS items exceeded the 80% agreement threshold for clarity and usefulness.

Phase 2: Reliability & Validity Testing

Next, 41 cancer survivors were assessed by trained physical therapists using the final scale. Results showed:

- Strong inter-rater reliability: ICC = 0.810
- Excellent intra-rater reliability: ICC = 0.941
- Moderate, significant correlations with related fibrosis measures.
- No ceiling or floor effects, indicating the scale was able to capture a full range of impairment.

Importantly, participants also rated the assessment as tolerable and meaningful.

Why This Matters

This study confirms that the Courage Kenny – Fibrosis Grading Scale is a reliable, valid, and clinically feasible tool for assessing cancer-related fibrosis. It offers clinicians a standardized way to document impairment severity and track response to rehabilitation, something that has been missing in the field. It also showcases the innovation and dedication of Courage Kenny clinicians and researchers who saw a need in patient care and worked together to create a solution.

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2026 Courage Kenny Research Therapists

We welcomed a new cohort of research therapists to the Courage Kenny Research Center in January. This year's research therapists include **Jessica Jacklitch, PT, MPT** and **Karli Kerzman, PT, DPT, NCS**. We asked the two of them a few questions to get to know them a bit better to kick off the year!

Can you share a bit about your background and what brought you to this role?

Jessica: I am a physical therapist with 23 years of experience within the organization – beginning at Courage Center (Stillwater, Forest Lake and Golden Valley) and then transitioning to Courage Kenny Kids in Coon Rapids/CKRI Outpatient Neuro when the merger occurred. I earned my Board Certification in Pediatrics in 2020 and continue to work at Courage Kenny Kids in Coon Rapids to date. I pursued the Research Therapist opportunity because I have a genuine love of learning new things. I knew that working in this role would allow me to stretch my brain in different ways and increase my understanding and appreciation of the work that goes into true evidenced based practice.

Karli: I'm a neurologic physical therapist at the Transitional Rehab Program in Golden Valley, primarily working with people post SCI and brain injury. I previously practiced with clients with neurodegenerative conditions and functional movement disorders. This role interested me as I've always been drawn to how research improves clinical practice and understanding ways to narrow the gap of knowledge transition. I am excited about the opportunity to learn new skills, develop relationships, and be challenged professionally in a new ways.

How do you see your work contributing to patient outcomes or study success?

Jessica: I have learned quickly that research thrives on a truly collaborative, team-based approach. It's been rewarding to support the principal investigators by taking on key background work and offering additional perspective as we interpret and discuss study findings.

Karli: I'm looking forward to supporting a variety of studies across therapy professions including ST, OT and PT including through problem solving, chart reviews, detail oriented tasks and logistical support. Much of our work will support the GRASP study gathering data regarding outcomes of patients with



Karli and her partner (Elora) at Zion National Park

Vivistim implants. This is a meaningful way to assess an exciting new therapy tool for people with chronic stroke and upper extremity impairments.

What's one thing you've learned so far that surprised you?

Jessica: I was very surprised to learn of the vast amount and wide variety of studies that are taking place in the CKRI Research Center simultaneously.

Karli: Prior to starting this role I did not appreciate how truly collaborative the research process is. Everyone has been so welcoming and supportive.

What has been your favorite part of working with research data or study participants?

Jessica: It has been very interesting to learn about the different styles of studies and what takes place throughout the different stages of the research study process. I have really enjoyed reflecting on the data in studies that are well underway – but also am very excited to be able to participate in another one that is just getting off the ground and gathering initial participants.

Karli: I appreciate the balance of collaboration as well as time for deep thinking, focus and detail-oriented work. I like that you have to hold both the "big picture" while also considering many smaller details. We have already supported multiple projects and the variety has been really interesting.

Outside of work, what's something you're passionate about or enjoy doing?

Jessica: I enjoy anything that brings me outdoors – especially jogging, hiking and gardening.

Karli: When not at work, I enjoy spending time with my partner, and dog, Koda. I love being outside, specifically hiking when I can. I also enjoy reading.

If you could describe your approach to therapy in three words, what would they be?

Jessica: Playful, compassionate, and empowering.

Karli: Collaborative, intentional, and goal-oriented.

What's one fun fact your new colleagues might not know about you?

Jessica: I have a ridiculously large collection of socks – and not one pair is just plain white.

Karli: I grew up playing basketball and was on my college team for 2 years at Concordia College, Moorhead. Go Cobbers!



Jessica Jacklitch, PT, MPT



Courage Kenny Research Initiates Enrollment in GRASP Vivistim® Registry

Courage Kenny Research Center has initiated enrollment of participants in the GRASP Vivistim® Registry, a national registry designed to better understand real-world outcomes of paired vagus nerve stimulation (VNS) therapy for individuals with arm and hand impairment following stroke.

The registry collects clinical and patient-reported information from adults with chronic stroke who are considering or undergoing treatment with the FDA-approved Vivistim® System, which pairs mild vagus nerve stimulation with task-specific upper-extremity rehabilitation. Data are collected before and after clinically indicated device implantation and during follow-up as part of usual care.



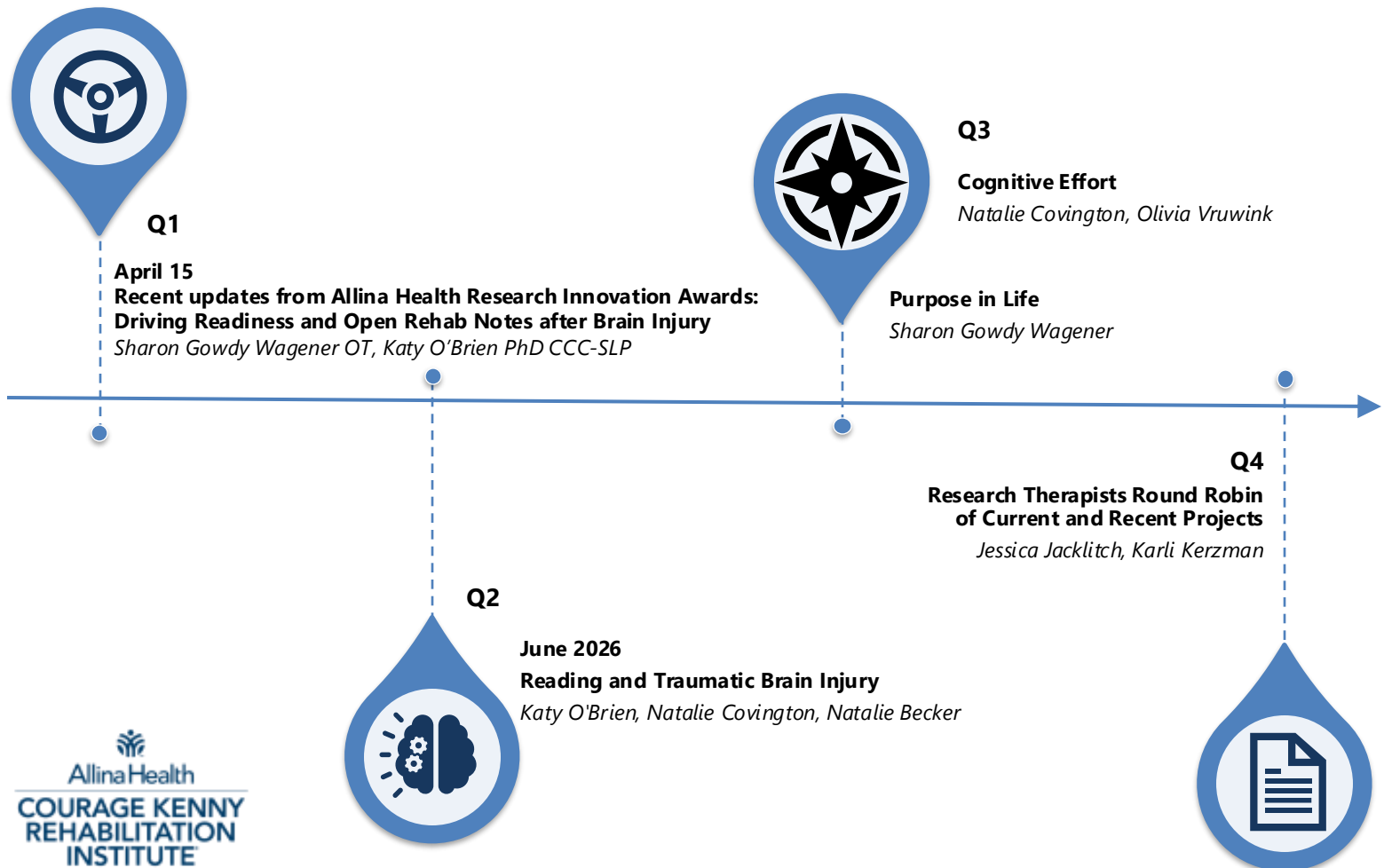
Emily Salveson, OT demonstrating Vivistim unit placement in a [recent Allina Health production](#).

By participating in the GRASP registry, Courage Kenny is contributing to a growing body of evidence on how paired VNS therapy is used in everyday clinical practice and how it may support recovery of arm and hand function after stroke. Information gathered through the registry will help clinicians, researchers, and patients better understand outcomes, quality of life, and long-term use of this innovative rehabilitation approach.

Shraddha Srivastava, PhD is serving as the site principal investigator Alisa Kocian, MA, OTR/L, ATP is leading study coordination and data collection for the study. Please reach out if you have questions related to this study or have patients who may be eligible to participate in this study.

2026 Research Meets Practice

(Content subject to change)



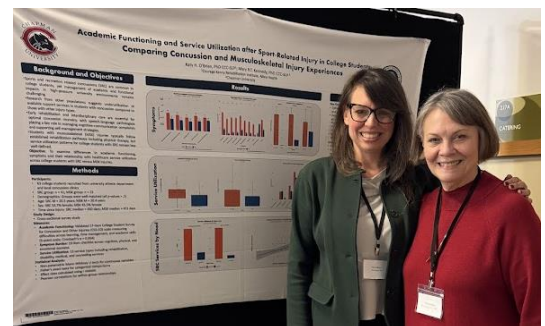


2026 Publications

- Pei, Y. & **O'Brien, K. H.** (accepted). Refinement and validation of Sources of Reading Self-Efficacy Scale for College and University Students (SOURCES-C) in college students with concussion. *Brain Injury*.
- Park, G., Khan, M.H.,, **Srivastava, S.**,Kim, H. (Online ahead of print). Associations between contralesional neuroplasticity and motor impairment through deep learning-derived MRI regional brain age in chronic stroke (ENIGMA): a multicohort, retrospective, observational study. *Lancet Digit Health*. doi: 10.1016/j.landig.2025.100942
- Monden, K.R., Hanks Philippus, A., Pai, N., **Shogren, C.**, Cui, E., Kowalski, J., Welch, A., Herrmann, A.A., Hanson, L.R., Reeves, R., **Srivastava, S.**, **DeRasmi, A.**, Anderson, K.D., Felix, E.R., Groah, S., Aguirre Guemez, A.V., Martinez, K., Morse, L.R., Worobey, L. (accepted). Association of meeting physical activity guidelines with psychosocial and health outcomes in spinal cord injury: The competing influence of income level. *Topics in Spinal Cord Injury Rehabilitation*.
- O'Brien, K. H.**, Kemp, A. M., Pei, Y., & Lundine, J. P. (accepted). "I can't do it all, even though I want to": A qualitative investigation of implementation barriers and facilitators for school-based speech-language pathologists in concussion management. *Language, Speech, and Hearing Services in Schools*.
- McCarty, M.**, **Covington, N. V.**, **Becker, N.**, **Klukas, C.**, & **O'Brien, K. H.**, (accepted). Reading comprehension and employment after TBI: Preliminary findings from clinical practice. *American Journal of Speech-Language Pathology*.

2026 Presentations

- Mitchell, J., **Covington, N. V.**, Duff, M. C. (January 2026). Measuring Memory with a Spatial Reconstruction Task in the Acute Care Setting Following Traumatic Brain Injury: A Feasibility Study and Group Comparison Data. [Conference Session] International Cognitive-Communication Disorders Conference, Nashville, TN.
- Covington, N. V.**, Pei, Y., **Zola, J.**, **Kath, K.**, **Radomski, M.** (January 2026). Preliminary Validation of a Meaning-in-Life Scale in Adults with Concussion. [Conference Session]. International Cognitive-Communication Disorders Conference, Nashville, TN.
- O'Brien, K.**, Pei, Y., **Vruwink, O.**, **Becker, N.**, **Klukas, C.**, **Covington, N. V.** (January 2026). Read anything good lately?: Evidence for Reduced Engagement with Leisure Texts after Brain Injury. [Conference Session]. International Cognitive-Communication Disorders Conference, Nashville, TN.
- Kennedy, M. R. T., & **O'Brien, K. H.** (2026, January). Academic functioning and service utilization after sport-related injury in college students: Comparing concussion and musculoskeletal injury experiences [Poster presentation]. International Cognitive Communication Disorders Conference, Nashville, TN.
- Bhella, C. **Srivastava, S.** Kautz, S.A. Seamon, B.A. (2026, February). Individuals Post-Stroke Improve Step Symmetry Without Changing Muscle Coordination During Acceleration and Deceleration Walking Tasks. [Poster Presentation]. American Physical Therapy Association, Combined Sections Meeting, Anaheim, California.



Dr. O'Brien and Dr. Mary Kennedy presenting on healthcare and service utilization by students with concussion at ICCDC in Nashville, TN.



Recent Courage Kenny Research Center Events



November baby shower and celebration of Caitlin Klukas's recent role change to Courage Kenny Quality Specialist.



The 2nd Annual Weightman Excellence in Physical Therapy Award was awarded to Rachel Vohs Nead, PT.

Courage Kenny Research Center Contacts

Alisa Kocian, MA, OTR/L – Research Therapist

Carol Vake, RN – Regulatory Specialist

Gayle Kusch, MSA – Interim Director Research Administration & Director, Research Integrity

Jessica Jacklitch, PT, MPT – Research Therapist

Karli Kerzman, PT, DPT, NCS – Research Therapist

Katy O'Brien, PhD, CCC-SLP – Senior Scientific Advisor

Kyle Francis, BS – Research Specialist

Laura Gilchrist, PT, PhD – Rehabilitation Scientist (Consultant), St. Catherine University

Natalie Covington, PhD, CCC-SLP – Rehabilitation Scientist, University of Minnesota

Ned Tervola, MA, LAT, ATC – Project Manager, Clinical Research

Sarah Pederson, MBA, MA – Director, Clinical Research

Shraddha Srivastava, PhD – Senior Scientific Advisor

Courage Kenny Research Center

Our mission is to conduct innovative, relevant clinical research that advances the field and improves rehabilitative care provided to people served by Courage Kenny Rehabilitation Institute and Allina Health.

[Visit us on allinahealth.org/ckresearch](http://allinahealth.org/ckresearch)