

Medical News

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Argentine Tango ‘Therapy’ Helps Restore Balance for Cancer Patients With Neuropathy

COLUMBUS, Ohio – Dance as a form of therapy – specifically Argentine Tango – has the potential to significantly improve balance and reduce falls risk among cancer patients experiencing peripheral neuropathy, according to new research conducted by a multi-disciplinary research team at The Ohio State University.

The pilot study was funded by [Pelotonia](#), a grassroots cycling event in Columbus, Ohio, that has raised more than \$106 million for cancer research efforts at [The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute](#) (OSUCCC – James). Pelotonia fellow and pre-med/dance major Mimi Lamantia collaborated with [Lise Worthen-Chaudhari](#), a physical rehabilitation specialist who studies movement at The Ohio State University Wexner Medical Center’s Neurological Institute, to conduct the research study.

Study Addresses Prevalent Side Effect of Cancer Treatment

Up to 70 percent of patients treated with chemotherapy will experience peripheral neuropathy as a side effect of cancer treatment. The condition can cause loss of sensation in the hands, fingers, feet and toes. One in 3 patients will still experience this problem six months post treatment.

Researchers say long-term neuropathy in the feet and toes can be especially problematic because it affects a person’s balance and gait. This puts them in an elevated fall risk when they are engaging in daily life activities.

“That’s a big deal because many more people are surviving cancer. Dealing with the issues that impact a person’s quality of life after cancer is extremely important,” says Worthen-Chaudhari, who is a faculty member within OSU’s Department of Physical Medicine and Rehabilitation. “As a dancer, I study the art of movement and as a biomechanist and rehabilitation scientist I study the math and the science of movement. We thought that it would be a powerful combination to put all those together to try to help cancer survivors.”

To evaluate the effect of Argentine Tango practice on the biomechanical predictors of fall risk among cancer survivors, Worthen-Chaudhari and Lamantia designed a dance intervention course that involved 20 sessions of adapted Argentine Tango. Patients participated in one-hour sessions twice a week for 10 weeks.

Researchers measured patients' standing postural sway (eyes closed) with a computer-aided force platform at the beginning of the dance intervention series and at completion of the 10-weeks of instruction. Patients were also asked to report satisfaction with the intervention.

"So many patients tell us that it is difficult to stay committed to physical therapy because it is hard and feels like work. We've show that Argentine Tango has measurable effects on balance -- but our patients report really enjoying dance as therapy. It is a fun, social way to do the necessary work and our initial data shows it has some positive impact for restoring balance," says Lamantia, who taught the Argentine Tango to a class of approximately 30 cancer survivors for this study.

Initial data from the first three patients who participated in the Argentine Tango study will be presented Nov. 3, 2016, at the 2016 annual meeting of American Congress of Rehabilitation Medicine in Chicago, Illinois.

"We show that after just five weeks of Argentine tango, medial and lateral sway decreased by 56 percent indicating that this is a promising balance intervention for cancer survivors experiencing impaired balance post treatment," says Lamantia.

This work provides the first known evidence regarding whether cancer survivors find a dance-based intervention, Argentine Tango, satisfying and feasible for balance improvement.

"As a dance educator I have personally witnessed the immeasurable joy, confidence and enhanced quality of movement in each Argentine Tango dancer over the course of 10 weeks," adds Lamantia.

About the Pelotonia Fellowship Program

The [Pelotonia Fellowship Program](#) has provided one and two-year research fellowship opportunities to undergraduate, graduate and medical students at Ohio State as well as postdoctoral fellows and international scholars. The program has awarded more than \$11 million in funding for 399 student fellowships at Ohio State. To learn more about participating in the Pelotonia 2016 event, visit pelotonia.org.

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About the OSUCCC – James

The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute strives to create a cancer-free world by integrating scientific research with excellence in education and patient-centered care, a strategy that leads to better methods of prevention, detection and treatment. Ohio State is one of only 46 National Cancer Institute-designated Comprehensive Cancer Centers and one of only four centers funded by the NCI to conduct both phase I and phase II clinical trials on novel anticancer drugs. As the cancer program's 306-bed adult patient-care component, The James is one of the top cancer hospitals in the nation as ranked by *U.S. News & World Report* and has achieved Magnet designation, the highest honor an organization can receive for quality patient care and professional nursing practice. At 21 floors with more than 1.1 million square feet, The James is a transformational facility that fosters collaboration and integration of cancer research and clinical cancer care. For more information, visit cancer.osu.edu.