

KEYNOTE DISCUSSION

Conversation led by Dr Charles Loprinzi with Dr Melissa Accordino, Dr Aishwarya Bandla, Dr Stephanie Graff, patient advocate Anne Marie Mercurio, and Dr Raghav Sundar. March 2022.

KEY DISCUSSION POINTS

- Chemotherapy-induced peripheral neuropathy is an unseen but potentially debilitating and lifelong chemotherapy side effect
- While there are some interventions available, they are largely unsuccessful to this point
- Patients are using their own cryotherapy options but they are unmeasured, untested, and often ineffective
- Cryocompression for CIPN has shown real promise in safety, tolerability and efficacy in studies to date

Development of the Chemotherapy-Induced Peripheral Neuropathy Cryocompression Device

‘IT’S WALKING THAT FINE LINE BETWEEN BALANCING HOPE AND EXPECTATION, WITH THE UNDERSTANDING THAT YOU ARE ADVANCING THE SCIENCE’ – *Anne Marie Mercurio, Patient Advocate*

Chemotherapy-induced peripheral neuropathy (CIPN) can have an enormous impact on a patient’s quality of life, during and following chemotherapy treatment, but at this point there is no successful method of treatment or prevention available. As the trial phase starts with a new cryocompression device that shows real promise to prevent CIPN, those who have been involved in the development of the system discuss what we already know about CIPN and what the future holds.

‘IN USING CRYOCOMPRESSION TO PREVENT CIPN, WE HAVE SEVERAL ADVANTAGES IN THAT THERE IS A HUGE NEED BEING DRIVEN BY THE PATIENTS THEMSELVES, AND WE HAVE THE PHYSICIANS WHO ARE OPEN TO ADOPTING NEWER TECHNOLOGIES AND TRY THEM OUT IN CLINICAL TRIALS THAN THERE WERE A FEW YEARS AGO’ – *Dr Aishwarya Bandla*

Neuropathy is not often high on the list of side effect concerns for patients ahead of chemotherapy, arguably due to a lack of education on the condition or the misconception that it will only cause low-level tingling or numbness. As we know, the impact of CIPN can range from being an irritation, to a disabling and debilitating side effect, so it is imperative that neuropathy is properly discussed with patients.

In addition to increasing patient awareness, prevention of CIPN is a priority, particularly as there is no known effective cure. All interventions to this point have been unsuccessful, and cost can be a limiting factor for symptom reduction methods given that they may be required for the rest of a patient’s life.

Current options to prevent CIPN include chemotherapy dose reduction, delayed treatment, or stopping treatment all together. Shared decision making is fundamental as these options can potentially have an impact on survival, but there is no doubt that having to make a choice of quality of life over improved survival is

not a decision that any patient or physician should have to make.

As a result, patients are turning to various available options in an effort to limit neuropathy, but these methods are untested, unmeasured techniques that may have limited success.

‘PREVENTION OF NEUROPATHY IS SO IMPORTANT, NOT JUST FOR PATIENTS WHO ARE GETTING ONE REGIMEN, BUT FOR THOSE WHO MIGHT HAVE TO GET ANOTHER ONE IN THE FUTURE TOO’ – *Dr Melissa Accordino*

Cryotherapy, causing localized vasoconstriction and resulting reduction in blood flow, has shown promise for the reduction of CIPN, but tolerability has up to this point posed a significant problem. However, it has been discovered that when combined with compression, cryotherapy is more tolerable, leading to potentially higher rates of efficacy. Teams at Paxman, the National University Hospital in Singapore, and the University of Huddersfield, have been working on a bespoke cryocompression device over the past five years, which is specifically designed for use in an oncology clinic to provide stable hypothermia

without limiting access to intravenous cannulation sites. Early phase clinical trials are now live in Singapore and are showing real promise, with a large-scale international trial to follow shortly.

There are however challenges with creating effective and fair control arm studies – for example: how do we find definitive answers without compromising on patient care? It can be a fine line between supporting patients and carrying out rigorous and comprehensive research, but it is the only way to establish a future standard of care that is so desperately needed, and has real potential to improve patient quality of life.

A tailored cryocompression device to prevent chemotherapy-induced neuropathy shows true potential, and there is no doubt how important a preventative intervention could be. In the meantime, continuing to check in with patients, discussing in detail options for limiting CIPN, and ensuring that patients feel comfortable discussing their side effects with clinicians are currently the most effective ways to help prevent or manage neuropathy.

SUMMIT POLL RESULTS

80% of Summit delegates said they would implement a cryocompression device for the prevention of CIPN at their facility, on the basis of accessing more information.



Scan to watch the opening discussion key points

FURTHER READING

Loprinzi C, et al. *Prevention and Management of Chemotherapy-Induced Peripheral Neuropathy in Survivors of Adult Cancers: ASCO Guideline Update*. Journal of Clinical Oncology 2020 38:28, 3325-3348

Jordan B, et al. *Systemic anticancer therapy-induced peripheral and central neurotoxicity: ESMO-EONS-EANO Clinical Practice Guidelines for diagnosis, prevention, treatment and follow-up*. Ann Oncol. 2020 Oct;31(10):1306-1319.

Kanbayashi Y, et al. *Comparison of the efficacy of cryotherapy and compression therapy for preventing nanoparticle albumin-bound paclitaxel-induced peripheral neuropathy: A prospective self-controlled trial*. Breast. 2020 Feb;49:219-224.

Shigematsu H, et al. *Cryotherapy for the prevention of weekly paclitaxel-induced peripheral adverse events in breast cancer patients*. Support Care Cancer. 2020 Oct;28(10):5005-5011.

Schmid P et al. *Pembrolizumab for Early Triple-Negative Breast Cancer*. N Engl J Med 2020; 382:810-821.

Filter by ‘Chemotherapy Side Effect’ on the Scalp Cooling Studies Website for more clinical studies on the use of cryotherapy for CIPN: www.scalpcoolingstudies.com