

## INTERVIEW

# Radiation Therapy Alone vs Radiation Therapy Plus Radiofrequency Ablation/Vertebral Augmentation for Painful Spine Metastasis: A Phase 2 Randomized Controlled Trial

*An Interview With Brian Schiro, MD*

[Brian J. Schiro, MD](#)

**Keywords**

[Radiation Therapy](#)

[Radiofrequency Ablation](#)

January 2026

ISSN 2152-4343

## Key Summary

- A phase 2 randomized controlled trial was conducted to determine whether adding minimally invasive spine procedures to standard radiation therapy improves pain control compared with radiation alone for patients with painful spinal metastases treated in oncology settings.
- Pain response at the prespecified short-term follow-up was similar between patients treated with radiation alone and those receiving combined therapy, indicating no additional pain benefit from the multimodality approach in this population.
- Future studies that focus on earlier treatment, more focal disease, and optimized patient selection are recommended.

© 2026 HMP Global. All Rights Reserved.

*Any views and opinions expressed are those of the author(s) and/or participants and do not necessarily reflect the views, policy, or position of Vascular Disease Management or HMP Global, their employees, and affiliates.*



**Brian Schiro, MD**  
Miami Cardiac & Vascular Institute

VASCULAR DISEASE MANAGEMENT. 23(1):E16-E18.

Brian Schiro, MD, winner of the Best Poster Award at CIO 2025, recently spoke with *Vascular Disease Management* about his study comparing radiation therapy alone vs combined treatments to treat patients with symptomatic spine metastases. Dr Schiro is a vascular and interventional radiologist at Miami Cardiac & Vascular Institute and Medical Director of the Noninvasive Vascular Lab at Baptist Hospital.

### ***Congratulations on your Best Poster this year at CIO! What key clinical questions motivated your group to conduct this study?***

The reason that we wanted to conduct this study is because there's been a substantial amount of research on patients that get either radiation treatment or radiofrequency ablation (RFA) plus or minus vertebral augmentation. These are looked at as competing treatment modalities. What we were hoping to accomplish was to look at the 2 combined treatments to see if there's an improvement in outcome in pain for these patients.

I would like to take the opportunity to thank my co-investigators. This was conducted in the radiation oncology department. It was the radiation therapy (RT) team who saw the patients, assessed their candidacy for the trial, and then together we reviewed imaging and decided whether or not the patients should proceed with enrollment.

***How did you determine the 1:2 randomization ratio between the external beam RT and combination arms?***

This was based on historical trials with RT and was powered for the primary outcome. We wanted to mirror some of the RT studies that have been published previously.

***You noted that the study terminated early after enrolling 63 patients (79% of planned accrual). What challenges did you encounter with patient recruitment and protocol adherence, and how might these factors have influenced statistical power or generalizability?***

The study was unfortunately slow to accrue for multiple reasons. The first was due to COVID; we had a substantial lag in the patients that were being enrolled at that time. So, for about 2 years or so, we had limited enrollment, and then it started picking up again at the end. Another was due to competing trials in the RT space. Near the end, we did a futility analysis and noted that continuing the trial through its targeted enrollment was not going to change the primary outcome.

***The study noted comparable adverse event rates between arms, though there was a spinal fracture in the combination group. What procedural refinements or patient-selection criteria could optimize safety and potential benefit when integrating RFA/RFA with vertebral augmentation with RT?***

What we have to remember is that these cancer patients have stage 4 cancer. They have been through lots of different treatments, and some of these treatments certainly affect their bone density. So, they are at increased risk for spinal fractures in general—once they have pathologic involvement of the spine or other bones, this only increases the risk for developing fractures. Vertebral augmentation is a great tool to prevent further collapse of the spine and helps alleviate pain.

If we look at the patients overall, unfortunately, we did have a significant dropout rate, which we anticipated and accounted for in the study design. The primary reasons for the dropout were because patients had progressive disease, and some of the patients died before they could be followed through the entirety of the study.

One of the things that we're looking at for future trials is treating these patients earlier in their disease state in order to provide some upfront therapy for bony metastases, hopefully preventing them from getting to the point where they have severe pain.

***Given that pain control and quality-of-life outcomes were similar across treatment arms, what are the next research steps for evaluating multimodality approaches in spinal metastases?***

Our primary outcome was not met, which means that pain response was similar between the patients that received RT alone vs patients that received RT plus RFA and vertebral augmentation. As an operator, it is interesting to see that outcome. We've looked at historical data from smaller studies that have shown that patients that have combined treatments do have early and significant improvement in their levels of pain.

I think one of the things that we need to point out as a potential criticism is the fact that patients may have had multiple spinal levels involved. The reasons that we enrolled those patients is because they were able to point out specifically where that pain was located at the spinal level, meaning point tenderness. So because of that, we were able to treat those particular locations.

However, on follow-up, when patients complained of persistent pain, although we believe that they did have improvement in the location of pain where we treated, it's more difficult to parse out a patient's current complaint of pain when other levels are involved that were not treated. This also could elicit a similar type of pain.

So, one thing that's important for us to look at in future trials is potentially having patients with more focal, oligometastatic disease and less diffuse bony involvement.

Also, it's important to potentially treat more than 1 or 2 levels. In this trial, we were restricted to treating no more than 2 levels because of the instructions for use of the device manufacturer. But we do know that if we treat more levels, that may provide more significant and durable pain relief for these patients.

***Is there anything else you'd like to share with our audience?***

I think that this is an important study, and it does add to the body of literature that we have available for treating patients with painful spinal metastases. Although this study does not show a significant improvement when we're talking about the primary endpoint of pain at 3 months, this is not a head-to-head trial; this does not look at RT vs RFA and vertebral augmentation

alone. So, I don't think that we should take away from this trial that RFA and augmentation are not successful treatments. From multiple studies, we do know that they are very successful. We should just take away that for the patients in the population that we treated, that we did not see a significant improvement in using the combined therapy vs radiation alone at the 3-month endpoint. So, I think that we still have many unanswered questions that we're going to have to look into with future trials. ■

HMP Education

HMP Omnimedia

HMP Europe

© 2026 HMP Global. All Rights Reserved.

[Cookie Policy](#) [Privacy Policy](#) [Terms of Use](#)