

## Implementation Strategies to Align Radiation Treatment for Non-Spine Bone Metastases Across an Academic-Community Partnership

Shivani Patel

Alyson McIntosh MD

*Lehigh Valley Health Network, Alyson\_F.Mcintosh@lvhn.org*

Erin Gillespie MD

*Lehigh Valley Health Network*

Noah Mattis MD

*Lehigh Valley Health Network*

Patricia Shearburn RN, MSN, AOCN

*Lehigh Valley Health Network, Patricia.Shearburn@lvhn.org*

Follow this and additional works at: <https://scholarlyworks.lvhn.org/research-scholars>



Part of the [Medicine and Health Sciences Commons](#)

---

### Published In/Presented At

Patel, S., McIntosh, A., Gillespie, E., Mattis, N., & Shearburn, P. (2022). *Implementation strategies to align radiation treatment for non-spine bone metastases across an academic-community partnership*. Poster presented at Research Scholars, Lehigh Valley Health Network, Allentown, PA.

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact [LibraryServices@lvhn.org](mailto:LibraryServices@lvhn.org).

# Implementation Strategies to Align Radiation Treatment for Non-Spine Bone Metastases Across an Academic-Community Partnership

Shivani Patel, Alyson McIntosh, MD, MPhil, Erin Gillespie, MD, Noah Mattis, MD, Patricia Shearburn, RN, MSN, AOCN

Lehigh Valley Health Network, Allentown, Pennsylvania

## Introduction

- Local treatment for patients with non-spine bone metastases has become increasingly complex and varied.
- Radiation oncologists designed implementation strategies aiming to facilitate uptake of radiation-specific recommendations.
- These implementation strategies, named Alliance Group Initiative for Bone Metastasis or "ALIGNMENT", included electronic access to consensus recommendations, an e-consult platform for physician-to-physician practice facilitation, and feedback reports.

**Objective:** To assess the extent to which the ALIGNMENT intervention is feasible in the community setting by measuring outcomes for management of non-spine bone metastases.

## Methods

Create a multidisciplinary panel of physicians at community-based partner sites

Identify patients between January to December 2020 and perform retrospective chart review

Create consensus recommendations and implement them at the sites

Identify patients between September 2021 to July 2022 and perform retrospective chart review for comparison.

## Results

Total RT Course (n)	Pre-Implementation Rt Courses (181)	Post-Implementation Rt Course (92)
Oligometastases	12%	21%
> 5 Metastatic Lesions	87%	79%
Radiosensitive	35%	42%
Radioresistant	7%	10%
Prior Radiation	17%	10%
Prior Surgery	15%	9.8%

Figure 1. Characteristics of Study Population from retrospective chart review before and after the implementation of consensus recommendations. Radiosensitive cancer included breast, prostate, myeloma, and small lung cancer and radioresistant includes GI cancer, sarcoma, and melanoma.

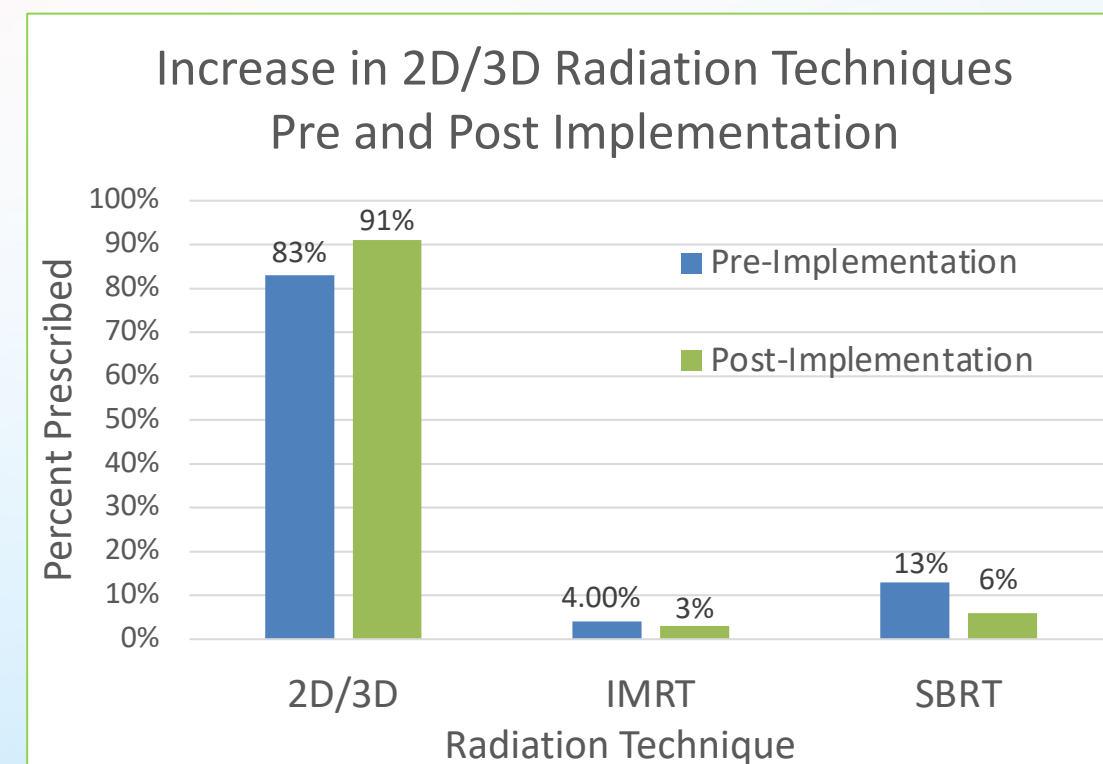


Figure 2. Bar graph depicting the difference in percent of radiation treatment prescribed (2D/3D, IMRT (Intensity-modulated radiation therapy), and SBRT (Stereotactic Body Radiation Therapy) before and after the implementation of ALIGNMENT. There is a slight increase in the use of the 2D/3D radiation technique.

## Conclusions

- Increase in 2D/3D Radiation Technique for treatments.
- Decrease in treating patients with prior radiation or surgery.
- Increase in treatment of radiosensitive lesions.

## Future Recommendations

- Perform complete statistical analysis to find statistically significant results
- Determine whether the difference in characteristics pre and post implementation align with consensus recommendations.
- Find additional measures to reduce variation across diverse practice settings.

## References

- Gillespie EF, Mathis NJ, Vaynrub M, Santos Martin E, Kotecha R, Panoff J, Salner AL, McIntosh AF, Gupta R, Gulati A, Yerramilli D, Xu AJ, Bartelstein M, Guttmann DM, Yamada YJ, Lin D, Lapen K, Korenstein D, Pfister DG, Lipitz-Snyderman A, Yang JT. Multidisciplinary Treatment of Non-Spine Bone Metastases: Results of a Modified Delphi Consensus Process. Clin Transl Radiat Oncol. 2022 Apr 26;35:76-83. doi: 10.1016/j.ctro.2022.04.009. PMID: 35620018; PMCID: PMC9127274.