

Advancing quality of care using a knowledge transfer approach to foster the use of single-fraction radiation therapy.

Olajumoke Johnson, James Hayman, Kelly Paradis, Melissa A. Mietzel, Danielle Kendrick; University of Michigan - Department of Radiation Oncology, Ann Arbor, MI; University of Michigan, Ann Arbor, MI; Michigan Medicine, Ann Arbor, MI; Department of Radiation Oncology, Rogel Comprehensive Cancer Center at the University of Michigan, Ann Arbor, MI

Background: There are significant barriers between the publication of scientific evidence and its adoption in clinical practice. Research in bone metastasis has demonstrated the effectiveness of single-fraction radiation therapy for uncomplicated cases. A persistent reluctance to adopt this approach in favor of multi-treatment courses remain. The aim of this project was to advocate for a better treatment method by employing a knowledge transfer approach to disseminate information, gather clinician feedback, and change practices. **Methods:** Initially, experts were invited to share best practices and raise awareness about the issue. Quality measures were developed with help from a consortium-wide working group and were introduced in 2020. The performance metric was steadily increased from 20% to a consortium-wide rate of $\geq 45\%$ in 2023. The knowledge transfer project involved using video presentations to educate clinicians on the benefits of single-fraction treatment, a post-session survey to assess the impact of the information provided, and a 30-minute virtual discussion that followed days after the presentation. The 30-minute recorded video presentation by a radiation oncologist with expertise in palliative care presented evidence in support of the treatment and dispelled myths surrounding single-fraction treatment. This was first piloted at four sites before being rolled out consortium wide. **Results:** The project was effective. Physicians at 22 radiation oncology centers reported an increased awareness of single-fraction treatment and a willingness to try it. The table shows: 100% reported the topic was relevant, 94% were prompted to reflect on their current practice, 63% reported their thoughts about fractionation changed and 84% acknowledged an increase in their knowledge of the evidence supporting single-fraction treatment. Annual rates of single-fraction use increased over time. The consortium wide target promoting the use of single fraction for uncomplicated patients was met in 2023– single fraction was used 46% of the time for the treatment of uncomplicated bone metastases patients as compared to about 37% in 2021. **Conclusions:** Patient care can be enhanced by supporting providers who make health care decisions daily. Quality care can be encouraged by conveying evidence-based knowledge to providers, who are responsible for making healthcare treatment decisions. This project illustrates that sustained efforts in knowledge transfer can effectively change clinical practice patterns to align with evidence-based recommendations. Research Sponsor: Blue Cross and Blue Shield of Michigan and Blue Care Network.

Knowledge transfer project.	
Physician participation vs. those invited to participate	22/24 (91.67%)
Survey Responses:	
a. Relevant to Practice	100%
b. Usefulness to practice and reflection on current practice	94%
c. Thoughts changed about fractionation treatment	63%
d. Knowledge of evidence supporting treatment increased	84%