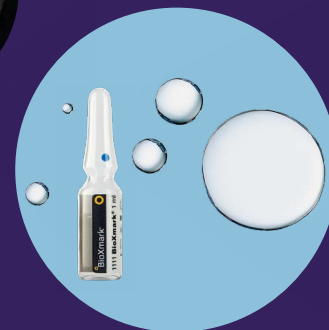


Single High-Dose Radiation Therapy and Liquid Fiducial Markers Can Be Used in Dogs with Incompletely Resected Soft Tissue Sarcomas



FULL ARTICLE



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OBJECTIVE

To evaluate how the BioXmark® liquid fiducial marker aids targeted, single-dose radiation therapy after narrow or incomplete surgical removal of soft tissue sarcomas in dogs.

BIOXMARK OVERVIEW

- Injectable liquid fiducial that forms custom radiopaque markers
- Enables precise soft tissue targeting with stable marker placement, low imaging artifact, and simplified workflow
- Used with IGRT/SBRT when reliable soft tissue localization is needed, particularly for partial resections, mobile or poorly defined tumors

SUMMARY

This study investigated the use of injectable liquid fiducial markers to support image-guided radiotherapy in 36 companion animals:

- Veterinary patients received percutaneous liquid fiducial marker placement along the surgical scar to provide a clear, stable target for stereotactic radiation therapy
- CT imaging was used to assess marker visibility, stability, and suitability for treatment planning
- Downstream radiotherapy workflows were evaluated for targeting accuracy and clinical usability

CLINICAL IMPACTS

- BioXmark provided clear, consistent CT visualization for precise target localization
- Minimally invasive placement reduced procedural burden compared to solid marker implantation
- Marker stability enabled precision consistent with stereotactic workflows, supporting treatment efficiency
- Side effects were generally localized and manageable, benefiting patient quality of life

KEY TAKEAWAYS

- 👁 **VISIBILITY** Liquid markers achieved strong CT contrast for reliable target delineation
- 🎯 **ACCURACY** Marker stability enabled consistent localization across imaging and treatment
- ✅ **EFFICACY** Treatment provided a 70% likelihood of remaining disease-free for 2.3 years