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## Background

- The concurrent use of stereotactic radiotherapy (SRT) and targeted therapy or immunotherapy shows promise for improving cancer outcomes like overall and progression-free survival, though it may be associated with an increased risk of toxicity due to drug-radiation interaction<sup>1,2</sup>.
- The LINACS Study, endorsed by EORTC-ESTRO within the OligoCare project, aims to summarize and give a “real-time” overview of all currently available published data about toxicity following concurrent SRT and targeted therapy or immunotherapy in cancer patients.

## Methods

- A systematic search was conducted on PubMed, using search terms based on all FDA-approved targeted therapies, antibody-drug conjugates, and immunotherapies listed by the National Cancer Institute (NCI).
- Duplicate studies were removed with EndNote, and abstract and full-text screening, as well as data extraction, were conducted using Laser AI software.
- ROB assessment was carried out using JBI Case Series checklist, JBI Case Report checklist, RoB 2 tool, and ROBINS-I v2
- Results will be published in a peer reviewed journal.
- The resulting database will be accessible via an interactive online platform, with quarterly updates to integrate new findings.
- The review is registered on PROSPERO (CRD42024559453).

## LINACS - Living systematic review and meta-analysis of toxicity following combined modality treatment of cancer patients with targeted systemic therapy and stereotactic radiotherapy

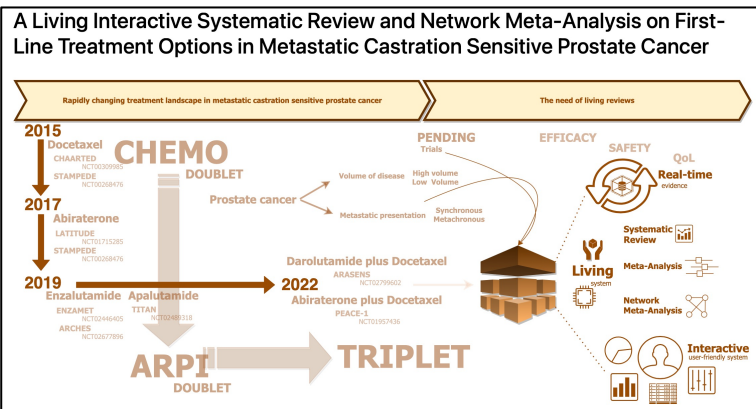


Figure 1. Example of a living interactive systematic review<sup>3</sup>

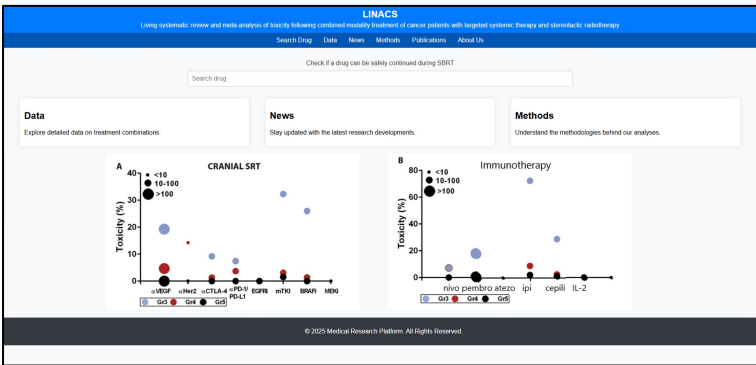


Figure 2. Preliminary draft of LINACS website

## Inclusion Criteria

- SRT = fraction doses >5 Gy
- Targeted therapy or immunotherapy given concurrently to SRT, or initiated within 30 days before or after radiation
- Toxicity graded according to CTCAE or properly described

## Data to Extract

- Year of publication
- Study type
- Patient and tumor characteristics
- Radiation dose and fractionation
- Type and dosage of concurrent targeted therapy/immunotherapy
- Timing of administration
- Toxicity assessed by CTCAE v5.0

## Future Clinical Relevance

This living systematic review will serve as a valuable tool for guiding treatment decisions involving combined local and systemic therapies in cancer patients. By continuously updating evidence on toxicity, it aims to support optimized and safer therapeutic strategies.

## References

- Kroez, S. G. C. et al. Toxicity of concurrent stereotactic radiotherapy and targeted therapy or immunotherapy: A systematic review. Cancer Treat. Rev. 53, 25–37 (2017).
- Kroez, S. G. C. et al. Metastases-directed stereotactic body radiotherapy in combination with targeted therapy or immunotherapy: systematic review and consensus recommendations by the EORTC-ESTRO OligoCare consortium. Lancet Oncol. 24, e121–e132 (2023).
- <https://living-evidence.com> (accessed April 8, 2025)