

Journal Club September 2023 - November 2023

Isozaki T, Ishikawa H, Yasuda S, Isozaki Y, Yamada S, Akutsu Y, Nagata M, Nabeya Y, Minashi K, Murakami K, Kuwano H, Nemoto K, Tsuji H, Uno T, Matsubara H.

A Phase I/II Trial of Definitive Carbon Ion Radiotherapy for Clinical T1bN0M0 Esophageal Squamous Cell Carcinoma.

Int J Radiat Oncol Biol Phys. 2023 Oct 1;117(2):416-421. doi: 10.1016/j.ijrobp.2023.04.014. Epub 2023 Apr 26. PMID: 37116590.

Surgery or chemoradiotherapy may be unsuitable for elderly esophageal cancer patients due to comorbidities.

The study addresses the need for less invasive and effective treatments in this population.

Carbon Ion Radiation therapy (CIRT), with physical and biologic advantages over conventional radiation therapy, is explored as a promising treatment.

The study focuses on its safety and efficacy for clinical T1b esophageal squamous cell carcinoma (ESCC).

Methods: 30 patients ineligible for surgery or chemotherapy underwent CIRT, with metallic markers or surgical clips implanted before treatment planning.

Acute toxicities included grade 3 esophagitis and leukopenia, with manageable late toxicities like esophageal stricture and ulcers.

High clinical efficacy, particularly a 92% complete response (CR) rate for doses of 45.6 Gy (RBE) or more, was observed.

The 5-year overall survival (OS) rate was 80.0%, highlighting CIRT's effectiveness in achieving favorable outcomes.

The study suggests that carbon ion radiation therapy (CIRT), especially in patients ineligible for surgery or chemotherapy, proves to be a promising treatment for T1bN0M0 esophageal carcinoma. Despite some manageable toxicities, the high complete response rate and 5-year survival of 80.0% indicate that CIRT might be comparable or even advantageous compared to conventional therapies. Further research with larger samples, however, is necessary to confirm its efficacy and feasibility.

Miszczyk M, Sajdok M, Bednarek J, Latusek T, Wojakowski W, Tomasik B, Wita K, Jadczyk T, Kurzelowski R, Drzewiecka A, Cybulska M, Gardas R, Jarosiński G, Dolla Ł, Grządziel A, Zub K, Bekman A, Kaminiów K, Kozub A, Gołba KS, Blamek S.

Stereotactic management of arrhythmia - radiosurgery in treatment of ventricular tachycardia (SMART-VT). Results of a prospective safety trial.

Radiother Oncol. 2023 Nov;188:109857. doi: 10.1016/j.radonc.2023.109857. Epub 2023 Aug 18. PMID: 37597807.

The study explores Stereotactic Arrhythmia Radioablation (STAR) as an innovative and minimally invasive technique to address potentially life-threatening ventricular tachycardia (VT).

VT poses a significant challenge when conventional therapies, including antiarrhythmic drugs and catheter ablations, prove ineffective. STAR is being investigated as a potential solution for cases resistant to standard treatments.

Safety and Feasibility Findings: preliminary results indicate that STAR is associated with acceptable short-term toxicity and no major concerns for acute cardiac toxicity.

Reduction in VT Burden: despite common VT recurrences, the treatment results in a substantial reduction in the VT burden, making STAR a promising option for selected patients with structural heart disease and clinically relevant VT recurrence following catheter ablation.

Long-term outcomes and prospective studies comparing STAR to standard care are deemed necessary to draw conclusive insights. The study suggests the need for continued research to optimize dose/fractionation schedules and refine patient selection for reirradiation with SBRT.

The article presents a novel approach to treating VT using stereotactic radiosurgery.

The focus on safety and efficacy endpoints, along with detailed methodology, strengthens the study's credibility.

Acknowledgment of limitations and the call for further research enhances the transparency of the study.

Overall, the article provides valuable insights into the potential application of STAR in treating VT, offering hope for patients with refractory ventricular tachycardia.

Francolini G, Garlatti P, Di Cataldo V, Triggiani L, Simoni N, Detti B, Lorenzetti V, Colombo F, Morelli V, Ganovelli M, Caprara L, Orsatti C, Burchini L, Frosini G, Bertini N, Loi M, Simontacchi G, Greto D, Desideri I, Meattini I, Livi L.

Pattern of recurrence after stereotactic body radiotherapy for para-aortic oligo-recurrent prostate cancer, a multicentric analysis.

Radiol Med. 2023 Nov;128(11):1423-1428. doi: 10.1007/s11547-023-01701-x. Epub 2023 Aug 19. PMID: 37597125.

Despite effective treatments for prostate cancer, recurrence remains a challenge, particularly in extrapelvic lymph nodes.

Novel molecular imaging methods, such as choline or PSMA PET CT, enable early detection of oligorecurrent disease, refining treatment approaches.

There is no standardized approach for oligorecurrent prostate cancer, with options including androgen deprivation therapy (ADT) and/or radiotherapy (RT).

Elective nodal RT (ENRT) is suggested for its promising efficacy and tolerability.

Metastasis-directed therapy (MDT) through stereotactic body RT (SBRT) is considered, particularly following the emergence of PSMA-tailored treatment approaches.

A cohort of 113 patients with oligo-recurrent M1a disease underwent SBRT.

Median progression-free survival (PFS) was 10 months, with a significant advantage observed in the castrate-resistant status.

Out of 83 recurrences, 43.37% were para-aortic nodal, 22.9% biochemical-only, and 18% distant metastases.

Following recurrence, patients had a median of 14 months before the next treatment, underscoring the potential benefit of SBRT.

No severe gastrointestinal or genitourinary adverse events were recorded, highlighting the safety of SBRT.

Oligometastatic castrate-resistant prostate cancer may benefit from upfront MDT, offering favorable progression-free survival with an optimal safety profile.

Metastasis-directed therapy, particularly through SBRT, demonstrated positive outcomes in a mixed cohort of patients. Prospective trials are needed to compare different treatment strategies and optimize outcomes while minimizing unnecessary toxicity.

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