

EVALUATION OF CLINICAL OUTCOMES AND TOXICITY PROFILE OF LINAC-BASED STEREOTACTIC BODY RADIOTHERAPY (SBRT) IN PATIENTS WITH PRIMARY AND METASTATIC LIVER TUMORS: A RETROSPECTIVE STUDY

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BACKGROUND

Stereotactic body radiotherapy (SBRT) is an effective treatment option for primary and metastatic tumors. This study evaluated patient characteristics, treatment outcomes, survival, and treatment-related toxicities following SBRT.

METHODS

Retrospective analysis of 24 patients treated with SBRT. Baseline demographic and clinical characteristics, treatment response, toxicities, overall survival (OS), progression-free survival (PFS), and dosimetric parameters were analyzed using SPSS. Survival was estimated using the Kaplan–Meier method.

RESULTS

- 24 patients; median age 53 years, 54.2% male; liver was the most common primary site and hepatocellular carcinoma the predominant histology (each 45.8%).
- Partial response in 37.5%; complete response and stable disease in 29.2% each; progression in 4.2%.
- Mean OS 39.5 months; mean PFS 23.7 months (median 20.9 months).
- Well tolerated: Grade 1 diarrhea 8.3% and vomiting 12.5%; no ulceration or rib fracture. Mean PTV coverage 97.79%; mean liver dose 6.88 Gy.

TABLE 1. Patient characteristics	
Characteristic	Value
Median age	53 years
Mean age	54.46 ± 9.56 years
Male sex	54.2%
ECOG 0 / 1 / 2	45.8 / 37.5 / 16.7%
Liver as primary site	45.8%
Hepatocellular carcinoma	45.8%

TABLE 2. Treatment response	
Response	Patients
Partial response	37.5%
Complete response	29.2%
Stable disease	29.2%
Progressive disease	4.2%

TABLE 4. Survival and dosimetry	
Parameter	Value
Mean OS	39.5 months
Mean PFS	23.7 months
Median PFS	20.9 months
Mean PTV coverage	97.79%
Mean liver dose	6.88 Gy

TABLE 3. Toxicity	
Toxicity	Patients
Grade 1 diarrhea	8.3%
Grade 1 vomiting	12.5%
GI bleeding	12.5%
Chest pain	4.2%
Ulceration	0%
Rib fracture	0%

CONCLUSION

SBRT demonstrated encouraging survival outcomes with high local disease control and an acceptable toxicity profile in this cohort. These findings support SBRT as a safe and effective treatment modality, although larger prospective studies are required to validate these results.