



**Service Priorities and Programmes**  
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**Stereotactic Ablative Radiotherapy: A Novel Modality for Oligometastases**

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**Introduction**

Radiotherapy is used to play a palliative role in management of metastatic cancers. The state of “oligometastases” in which metastases are limited in number and organs involved may possess different biological attributes comparing to widespread metastases. Aggressive local therapy like surgical resection can result in cure in this subset of patients. With the advancement of radiation techniques, stereotactic ablative radiotherapy (SABR) can now be employed to deliver an extraordinarily high fractional radiation dose to oligometastases resulting in effective local tumor control.

**Objectives**

To assess the feasibility and safety of SABR in treatment of oligometastases and to report the preliminary results in one single institute.

**Methodology**

Patients with solitary or oligometastases who received SABR since the commencement of SABR program in 2008 were included for analysis. The treatment toxicities were graded as per National Cancer Institute Common Terminology Criteria for Adverse Event, 3rd Edition (NCI-CTCAE v.3). Treatment outcome in form of local control rate was analyzed.

**Result**

From March 2009 to Jan 2013, SABR was successfully performed in 16 patients with distant metastases. The most commonly treated metastatic sites were lung (73%), bone (20%) and liver (7%). Majority of patients received 50-54 Gy in 3-5 fractions over 2 weeks. No patient experienced  $\geq$  grade 3 NCI-CTCAE v.3 acute toxicities. The median follow-up period in survivors is 7 months. (range 1 – 36). Most patients (88%) received chemotherapy before or after SABR was given. At the time of data cutoff, 15 lesions were assessable for treatment response. Among them, the crude local control rate was 81%. The overall survival was inconclusive at the time of analysis due to short follow up time. To conclude, SABR is a novel and safe treatment modality for patients with limited metastases. The preliminary outcome is encouraging, and it should be considered in patients with high surgical risk or surgically inaccessible metastases. Long term clinical evaluation is necessary.