Does Intensity of Surveillance Affect Outcomes After Surgery For Sarcomas? Results of a Randomized Trial

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**Background:** Currently followed post operative surveillance regimes in sarcomas are empirical. Whether they actually result in improving overall survival of patients with extremity sarcomas is a question that remains unanswered.

**Questions / purposes:** Our hypothesis was that a less intensive, cost-effective follow up protocol would be non-inferior to the conventional follow-up protocol in terms of overall survival.

**Methods:** A prospective randomized non-inferiority trial was conducted between January 2006 and June 2010. Primary objective was to show non inferiority of cost effective (chest X ray) follow up group to intensive (CT scan) follow up group and that of less frequent (six monthly) to more frequent (three monthly) follow up group in a two by two comparison. On basis of 3 year survival of 60% with intensive, more frequent follow up, 500 non metastatic patients were randomized to demonstrate non-inferiority. Primary end-point was overall survival (OS). Identification patterns of local recurrence were also documented.

**Results:** At a median follow up of 61 months, 209 deaths were documented. 5 year OS for all patients was 57 %. 5-year OS was 56 % and 58 % (p=0.94) in cost effective and intensive groups respectively and 58 % and 55 % (p=0.37) in the 6 monthly and 3 monthly groups respectively. Almost all local relapses were identified by patients themselves.

**Conclusions:** Patient education regarding self examination and inexpensive imaging will detect vast majority of recurrent disease without deleterious effects on eventual outcomes. This trial also demonstrated non inferiority in overall survival for a 6 monthly interval of follow up visits as against 3 monthly. This trial can be an important step in evolving an evidence based surveillance protocol. It helps identify a cost effective regime using optimal investigative modalities and frequency of follow up visits without jeopardising survival and affecting outcomes.