

A COMPARATIVE STUDY BETWEEN 17 GRAY TWO FRACTIONS VERSUS 39 GRAY THIRTEEN FRACTIONS PALLIATIVE THORACIC RADIOTHERAPY IN ADVANCED NON-SMALL-CELL LUNG CARCINOMA

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SUMMARY:

- In an effort to improve symptom palliation, palliative thoracic radiotherapy (TRT) has been integrated into various palliative approaches in patients with advanced non-small cell lung Cancer (NSCLC).
- Palliative TRT can be given using both hypofractionated and multifractionated regimen.
- In this study safety and efficacy of both treatment arms has been evaluated and compared.
- Arm A = 17 gray two fractions one week apart (hypofractionated) and Arm B = 39 gray 13 fractions (multifractionated)

INTRODUCTION:

- Nearly 70% of lung cancer patients present with locally advanced or metastatic disease during diagnosis (Molina et al., 2008).
- Most of these patients present with symptoms related to primary tumor. Most frequent symptoms are cough, dyspnea, and haemoptysis (Sundstrom et al., 2004).
- Thoracic radiotherapy (TRT) is an effective approach for controlling local disease and palliating symptoms in NSCLC (Sause, 1999).
- A series of randomized trials have been carried out to decide optimal palliative TRT in NSCLC. Superiority of any particular regimen has not yet established. (Senkus-Konefka et al., 2005)

OBJECTIVE:

- Evaluate and compare the safety and efficacy of both hypofractionated and multifractionated palliative TRT in the management of advanced NSCLC.

STUDY DESIGN:

- Quasi-experimental study.

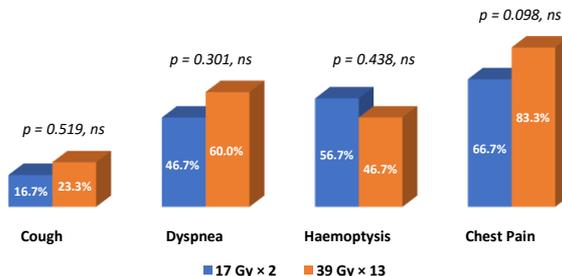
METHODS:

- Sixty patient of advanced NSCLC were randomly allocated to either Arm A or Arm B.
- They were followed up for 6 months at the OPD. Symptomatic response to the treatments, tumor response, and grade and frequency of toxic effects were the outcome measures.

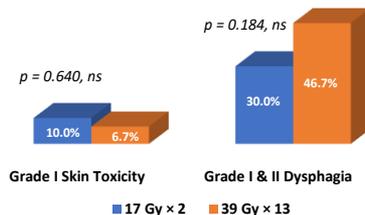
- Symptomatic response was measured using quantitative scoring system of cough, modified Medical Research Council Dyspnea scale, haemoptysis grading, four point scale for assessment of chest pain.
- Radiation toxicities were assessed according to RTOG Acute Radiation Morbidity Criteria.
- Tumor response was measured 8 weeks after completion of treatment according to the Response Evaluation Criteria in Solid Tumors (RECIST), version 1.1.

RESULTS:

- Both treatment groups were comparable in terms of baseline characteristics including age, tumor stage and symptom distribution.
- Palliation of the main symptoms was achieved similarly in both groups.



- Dermatitis and esophagitis were the treatment toxicities with similar distribution in both groups.



- There was no change in performance status and tumor response in the entire cohort.

| Variables | Arm A 17 Gy x 2 (n=30) | Arm B 39 Gy x 13 (n=30) | P Value |
|--|------------------------------|-------------------------------|---------|
| ECOG Performance Status No change | 30 (100) | 30 (100) | NA |
| Tumor Response Stable disease | 30 (100) | 30 (100) | NA |

CONCLUSION:

Short-term hypofractionated treatment renders similar improvement in symptom relief or survival when compared with protracted palliative TRT in advanced NSCLC.

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