

### **3. Abstract**

**Purpose:** The primary objective of the study was to determine the symptom-free survival (SFS) among the patients, who were treated with Gemcitabine-based chemotherapy alone (group A) or combined with Radiation (group B) for stage IIIb-IV non-small cell lung cancer (NSCLC). The secondary objectives were to determine the response of symptoms to each mode of treatment and the overall survival (OS) in each group of patients.

**Materials and Methods:** A total of 92 patients, who were treated with either Gemcitabine-based chemotherapy alone (Group A) or in combination with Radiotherapy (RT) (Group B) for stage IIIb or IV NSCLC within 3 years (1<sup>st</sup> of January 2006-31<sup>st</sup> of December 2008) in a single unit at the National Cancer Institute of Sri Lanka were audited retrospectively using patients' clinical notes.

**Results:** Out of a total of 92 patients (75 males/17 females), 45 had received Gemcitabine-based chemotherapy alone and 47 had received Gemcitabine-based chemotherapy in combination with RT (either concurrently or sequentially). The median age was 60 years (range 24-82 yrs).

The SFS in group B was significantly higher (78.30d vs 54.11d) ( $p=0.0001$ ) than in group A. Cough, shortness of breath (SOB) and pain had responded significantly better in group B patients while haemoptysis and pleural effusion had no difference in response to either treatment. Furthermore, the OS in group B (258.66d) was significantly higher than in group A (130.91d) ( $p<0.0001$ ).

**Conclusion:** Combined treatment of Gemcitabine-based chemotherapy with RT is better than Gemcitabine-based chemotherapy alone in controlling the symptoms such as cough, SOB and pain but addition of Radiation to chemotherapy will not change the outcome of symptoms such as haemoptysis and pleural effusion, among stage IIIb/IV NSCLC patients.

**Keywords:** Gemcitabine, Radiotherapy, symptom-free survival, overall survival