



Title	Exhaled nitric oxide (eNO) level is not related to quality of life (QoL) parameters in non-small cell lung cancer (NSCLC)
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RM-19 Efficacy and safety profiles of a combination of gemcitabine and ifosfamide on Chinese patients with advanced non-small cell lung cancer

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Purpose: Chinese patients with non-small cell lung cancers often present differently from their Western counterparts, although they often present in unresectable stages rendering curative surgical treatment not possible. Combination of gemcitabine and ifosfamide has theoretical advantages but the precise safety profile and efficacy are unknown locally.

Methods: We have, therefore, performed this open-labelled study to prospectively recruit patients with stage III or IV NSCLC who have not received previous chemotherapy with informed consent. A combination of Gemcitabine (1g/m², day 1 and 8) and Ifosfamide (3g/m², day 1) was administered in 4-weekly cycles. Patients with clinical response or static disease received 6 cycles if tolerated. Chemotherapy was withdrawn in the event of clinical or imaging evidence of disease progression.

Results: 26 patients (F=12, mean age 55.3±9.9 yrs, stage IIIB/IV=12/14) completed the study with evaluable response. Of these, 5 (19.2%) showed partial response, and 3 (11.5%) showed static disease, and 18 (69.2%) showed progressive disease. Four patients (15.3%) needed dose reduction or omission, usually on day 8 of the respective cycle, for WHO Grade I–III neutropenia. Two patients (7.7%) had WHO Grade I and II thrombocytopenia. All of them recovered spontaneously without developing severe life-threatening complication. Other patients managed to complete each cycle on time with targeted dose administration.

Conclusion: The combined administration of Gemcitabine and Ifosfamide in chemo-naïve advanced NSCLC patients was well tolerated in this study and gave rise to a comparable response rate as previously reported. Our results would help respirologists and oncologists in the management of Chinese patients with advanced NSCLC.

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Purpose: Although eNO measurement has become highly popular as a non-invasive monitoring means for many respiratory and systemic diseases, and NO metabolism appears to be involved in the pathogenesis of many neoplastic diseases, little is known on the relationship between eNO and clinical, immunological, and QoL parameters in NSCLC.

Methods: Patients with histologically or cytologically confirmed NSCLC were recruited from the University Department of Medicine at Queen Mary Hospital. Clinical parameters, baseline blood tests, serum immunoglobulins (Ig), and QoL parameters (EORTC, Rottadam, HADS) were collected. eNO was measured by using an automatic chemiluminescence analyzer at steady expiration.

Results: There were 68 subjects (45M, 58±11 yrs) recruited with 39 adenocarcinomas, 15 squamous cell carcinomas, and 14 undifferentiated NSCLC. TNM stages were 3A, 3B, and 4 on 2, 28 and 38 respectively. Four subjects had previous lung resections, 50 had chemotherapy, and 33 had radiotherapy. The serum IgA levels were significantly higher in undifferentiated NSCLC (1888±280mg/dl) than squamous cell carcinomas (1512±129 mg/dl) and adenocarcinomas (1389±54mg/dl) [p=0.029]. Performance status (Karnovsky scale) significantly correlated with haemoglobin (r=0.35, p=0.003), total white cell count (r=-0.40, p=0.001), and neutrophil count (r=-0.43, p<0.001). Multiple regression model identified haemoglobin as the only independent predictor of performance status (p=0.032). Lung function index FEV1/FVC significantly negatively correlated with eNO in the whole group (r=-0.39, p=0.001), in adenocarcinomas (r=-0.38, p=0.02), in males (r=-0.44, p=0.003), in well differentiated carcinomas (r=-0.49, p=0.01), and in stage 4 disease (r=-0.367, p=0.028). eNO only correlated with neuropathy score (p=0.03), but not to the overall QoL score.

Conclusion: Increased eNO appears to be related to airflow obstruction, thus underlying airway disease, rather than QoL among patients with NSCLC.